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"The Cellulose Age"

EDITORIALS

This Was NOT Speculation

During the recent political flurry over the speculators in grain futures, a confused public was hard put deciding how to separate sheep from goats. Some paper mills operations did a little dealing in corn futures about a year ago, too, and they might have got a black eye for it, among people who took the political angles seriously or didn't look below the surface.

The paper industries weren't dealing in "human misery" in the sense that President Truman meant. What they were trying to do was just the opposite—to avoid human misery by keeping their mills running and their thousands of employes on the job—as well as the many thousands more involved in the distribution and utilization of coated papers.

They bought many thousands of bushels of corn on the commodity market future delivery—to be sure they would have a supply of corn starch to make coated papers. The millers of corn products were unable to promise corn for more than a month ahead. The paper industry's holdings in the corn market were probably all sold several months ago, when the corn supply situation eased up.

Rice flour and potato starch and other substitutes for corn starch for coating have been tried out in the paper mills and so far none of them has worked out satisfactorily. There was only one alternative for the paper industry—that was to buy grain futures.

The paper industry has provided the world with the kind of packaging which has made the modern store possible.

Opportunities for College Men

All day Friday, Jan. 16 and the evening, too, about 60 selected young men from several Pacific Coast colleges toured the big, diversified mill of Crown Zellerbach Corp. in Camas and heard a number of young executives from several companies on the Coast tell them about the opportunities in this industry. Most of these speakers were not much older than the guests, yet they have attained responsible engineering, technical and managerial positions.

This unusual event—an idea developed by Pacific Coast TAPPI—is something the industry all over the country might well give serious thought to. The Camas "round table" discussions were in good hands and were intelligently handled and didn't deteriorate into just a propaganda stunt.

Some other units of this industry—companies like Union Bag & Paper Corp. and Minnesota & Ontario Paper Co., which have sponsored scholarships—have been alert to the need for giving college students a chance to know more about their opportunities in pulp and paper.

But the pulp and paper industry never had gone into this liaison work with the universities and colleges with their coats off and their sleeves rolled up—until the Camas meeting.

Sponsors of the Camas meeting recognized that, in this age, a young man can't dabble around very long if he wants to get ahead in the world—he has to decide as soon as possible, the earlier the better, on his career.

The big oil and soap companies and the steel industries recognize this. Some persons may think they go pretty far in glamorizing their industries. But, if that is true in some few cases, the pulp and paper industry has leaned back too much the other way.

It is generally known in this industry that a number of alert men who came to this country from Scandinavia in the past score of years or so, saw the chance to work up into top pulp and paper positions which were scorned, or not even known about, by young men graduating in chemistry or engineering in universities just a few miles away from these new modern pulp and paper mills.

Perhaps those young graduates thought it was more exciting to build bridges in India or Africa than in work in that mill being built up the near-by river. The pulp and paper industry could have done a better job getting them interested in what was going on in their own backyard.

Some mills have realized that they can no longer expect these young men to spend several years starting in the mills as "testers"—jobs that can just as well be done by non-technical men. One idea is to bring the young college students in as "junior assistants" or "junior technicians" and let them get around in different departments of the mill in order to absorb a broad perspective of the industry in their first few years.

Along this line of reasoning, George H. Pringle, graduate of McGill and now chief engineer of the big Chillicothe, Ohio, division of Mead Corp., warns that when the great influx of college-trained G. I. engineers starts to pour out into industry in a year or so, the pulp and paper management should go slow in assigning them to specific maintenance or operations jobs. He thinks the engineers should be assigned to drafting rooms for at least a year and given a chance to get acquainted with all departments.

"Next to food and shelter, paper is one of the necessities of life."—George K. Ferguson, President and General Manager, Watervliet Paper Co., Watervliet, Mich.

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HANDY REFERENCE—On Page 80 of January issue is a complete index of articles published in Volume 21 — all issues of PULP & PAPER in 1947.

Plans for Paper Week

PROGRAM MOVED DAY AHEAD

What may be the biggest Paper Week in history opens full blast Feb. 23 when the combined annual programs of both AP&PA and TAPPI get under way, the former at the Waldorf and the latter at the Commodore Hotel in New York City as per tradition.

It is anticipated, in the normal course of events, that Cola Parker will become president of AP&PA, and W. F. Gillespie will continue as head of TAPPI, a position to which he succeeded at the death of Worthen Brawn last year. Mr. Parker is president of Kimberly-Clark, and Mr. Gillespie is Technical Director of Gaylord Container Corporation.

Albert E. Bachman, vice president and superintendent of Mississippi Corp., groundwood and board mill in Vermont, is slated to succeed W. R. Barber, Crown Zellerbach technical director, as TAPPI vice president.

A big change in the broad program of the AP&PA week will be the restoration of the semi-formal annual dinner on the 26th. This takes the place of the annual industry luncheon which was put into effect during the war and until this year. Many notables are scheduled to sit at the head table, both from within and without the paper industry.

Principal speaker will be John M. Hancock, one of America's top industrialists. He is a partner in Lehman Brothers, and chairman of the board of a dozen top companies, as well as director of Kresge, Flintkote, American Stores, Jewel Tea, and many others. During the war he was prominent in the War Recources Board, the Office of War Mobilization, and more recently was active as a delegate in the Atomic Energy Commission abroad. He is president of the American Management Association.

Another change this year in the AP&PA program is the elimination of Sunday meetings. All meetings have been moved ahead one day, to begin on Mon., Feb. 23. This places the annual Salesmen's luncheon on Wed., Feb 25.

COMING INDUSTRY MEETINGS

Southern Pulpwood Assn., Atlanta, Ga. ..... Jan. 28
Canadian Pulp & Paper Assn.—Mt. Royal Hotel, Montreal....Jan. 30-31
TAPPI Kalamazoo Valley Section—Columbia Hotel, Kalamazoo, Mich. ..... Feb. 5
Supts. Michigan Division—Park American Hotel, Kalamazoo, Mich. ..... Feb. 19
Southern Forestry Conference—Jackson, Miss. ..... Feb. 18-19
American Paper & Pulp Assn.—Waldorf Astoria, New York..... ..... Feb. 23-27
TAPPI National Convention—Commodore Hotel, New York..... ..... Feb. 23-26
TAPPI Empire State Section (West) —Prospect House, Niagara Falls, N. Y..... Feb. 18
TAPPI Lake States Section—Am. Legion Hall, Appleton, Wis. ..... Feb. 10
TAPPI Empire State Section (East) —Queensbury Hotel, Glens Falls, N. Y..... Feb. 20
TAPPI New England Section—Roger Smith Hotel, Holyoke, Mass. ..... Feb. 20
U. of Maine Alumni Luncheon—Hotel Commodore, New York..... ..... Feb. 23
National Council for Stream Improvement—Waldorf Astoria, New York..... Feb. 23-25
TAPPI Pacific Coast Section—Tacoma, Wash..... Mar. 9
Michigan Supts.—American Hotel, Kalamazoo (Annual Coating Meeting)..... Mar. 18
Chicago Profession Paper Group—Chicago Bar Assn., Chicago..... ..... Feb. 16 and Mar. 22
Forest Products Research Society—Chicago ..... March 22-24
Wood Products Clinic—Spokane, Wash..... Mar. 22
Canadian Industry Woodlands Section—Montreal..... Mar. 31-Apr. 1-2
National Paper Trade Assn.—Waldorf-Astoria, New York..... ..... April 5-7
Packaging Show—Public Auditorium, Cleveland..... ..... Apr. 26-30
National Paper Box Mfgrs.—Netherlands Plaza, Cincinnati..... ..... May 9-12
National Supts. Convention—Roosevelt Hotel, New Orleans..... ..... May 19-21
Envelope Mfgrs. of America—White Sulphur Springs, W. Va..... ..... June 10-11
National Paper & Twine Assn.—French Lick Springs, Ind..... ..... June 11-12
Technical Section Canadian Assn.—Harrison Hot Springs, B. C..... ..... Sept. 4-6
National Paper Trade Assn.—Hotel Stevens, Chicago..Oct. 28-30
TAPPI Fundamental Research—Madison, Wis..... Aug. 25-27
TAPPI Mechanical Pulping—Poland Springs, Maine..Sept. 27-29
TAPPI Engineering Conference—Buffalo, N. Y..... Oct. 25-28
Paper Industry Salesmen—Midston House, New York City—Every Monday, 11 a.m. - 2:30 p.m.

PULP BATTLE

Overseas

An illuminating report on how the world of Communist Russia is using established totalitarian tactics to capture international paper industry markets is related in an interview which **PULP & PAPER** has had with Giovanni Colombo, an Italian importer of paper mill equipment and supplies for 18 years (Signor Colombo, who is now on a tour of U. S. can be reached through this magazine).

Despite sanguine reports in the daily press about the prospect of Italy developing close trade and cultural relations with democratic nations, Czechoslovakia, a Russian satellite, has already become an important factor in supplying pulp to Italian paper mills. With Italian mills generally in good shape but short of pulp, and with potential per capita Italian consumption of paper several times greater than it actually is today, Czechoslovakia already has moved into the picture as an important pulp supplier.

With state control in Czechoslovakia, one marketing agency has been set up for all of the mills in that country. The owners of the mill no longer have charge of their operations, said Signor Colombo. Also, working through a single agent in Italy, the Czechoslovaks have become the biggest supplier to that country, shipping about 35,000 tons of bleached and unbleached sulfite pulp in the past year—all by rail. "The price of this Czechoslovak pulp is always unknown," he said.

Up to now, Sweden has been the principal exporter of pulp to Italy. Beginning 18 years ago, Signor Colombo pioneered in importing the first American pulp to Italy, at the instigation of the late Ossian Anderson, one of the principal founders of the Pacific Coast market pulp industry, who envisaged the day when American pulp would be shipped to nations all around the world. That first shipment to Italy was from the old San Juan Pulp Co. on Puget Sound. Small quantities of American pulp were shipped each year up to the outbreak of the war. Pacific Coast pulp surprisingly, can be shipped more cheaply by water to Italy than pulp shipped from Sweden.

A new agreement between Sweden and Italy is reported just going into effect this year for shipment of 35,000 to 40,000 tons of pulp to Italian paper mills and 35,000 to 40,000 tons to Italian rayon mills. About 50 important Italian paper mills all import pulp. There are about 150 small paper mills. Five rayon plants are in Italy. All are in good shape except a few in Southern Italy damaged during the war. Those in the North, where the Germans moved out fast, were virtually unharmed.

Giovanni Colombo, whose offices are in Milan, Italy, is enjoying the first reunion in 17 years with his three brothers in California. With one of them, Ed Colombo, president of a fruit and vegetable packing company, he has been touring some American market pulp centers.

TAPPI'S GOLD MEDAL
Goes to Dr. Emil Heuser

Dr. Emil F. F. Heuser, who might be called "*The* Mr. Cellulose" of this industry, is TAPPI's Gold Medal winner for 1948.

Just a few weeks ago it was announced that Dr. Heuser was retiring from the Institute of Paper Chemistry, Appleton, Wis., where he has headed up the work in cellulose studies for a number of years and that he will make his home in California. However, it is anticipated that he will be on hand at the final luncheon of the TAPPI convention in the Hotel Commodore in New York on Feb. 26 to receive the medal from TAPPI President Wilbur F. Gillespie, technical director of Gaylord Container Corp.

Dr. Heuser's notable career includes extensive work in rayon pulp and alcohol-from-wood pulp, and he held the chair of cellulose chemistry at the famous University of Darmstad. Later he lectured at Berlin University before emigrating to this country.

His book "The Chemistry of Cellulose" is on the library shelves of hundreds of pulp and paper mills or those of their executives, and he is author of many other works which cover that subject more thoroughly, perhaps, than those of any other individual with the possible exception of the late Dr. Harold Hibbert.

His work at the Institute included the development of a "new tool" for evaluating wood pulp by the determination of molecular chain length and chain length distribution. Although retired, he will continue as a consultant to the Institute.

Dr. Heuser pioneered in another undertaking when he came to the Pacific Coast in October of 1947 and conducted the first industry-wide technical seminars ever held anywhere. These were in Portland, Ore., and Seattle, and were sponsored by Pacific Coast TAPPI. More than a score of pulp and paper mills sent about 100 young men and a few women from their staffs to the seminars, paying their seminar fees and giving them two days' expenses.

Dr. Heuser's "Chemistry of Cellulose," a compendium and critical digest, was published in 1944. His "Textbook on Cellulose" was published in 1924.

Under by-laws of TAPPI, the Gold Medal award can be made only by a virtually unanimous vote of the TAPPI executive committee. There can be no more than one dissenting vote. The executive committee now consists of 15 members, including the president and vice president of TAPPI.

In the past 21 years, the award has been made just 16 times.

The late William H. Mason, inventor of the Masonite process, was the first winner, in 1928. Ogden Minton, deceased; Ernest Mahler, executive vice president of Kimberly-Clark; Edward Sudermeister, noted author in the industry; William Millspaugh, machinery inventor now in England; Clarence J. West of the Institute; the late C. B. Thorne, equipment inventor; J. Newell Stevenson; and Dr. Otto Kress, technical director of the Institute at Appleton, were the winners prior to World War II. Other winners follow:

DR. and MRS. EMIL F. F. HEUSER, in pictures recently taken by PULP & PAPER. Dr. Heuser might be described as "The Mr. Cellulose" of this industry, for he is an outstanding authority on that subject. For his work in that field he will be awarded the 1948 TAPPI Gold Medal at the TAPPI convention in the Commodore Hotel, New York, in late February. He recently retired from the Institute of Paper Chemistry, Appleton, Wis., but will continue as consultant to the Institue while making his home in California.

1942—Robert B. Wolf, retired manager of the Pulp Division of Weyerhaeuser Timber Co., who is now living in New England.

1943—Harry Fletcher, president of the Fletcher Paper Co., Alpena, Mich.

1944—D. Clark Everest, president of Marathon Corp., Rothschild, Wis.

1945—B. W. Scribner, Paper Division, Bureau of standards, Washington, D. C.

1946—William G. McNaughton, News Print Bureau, New York.

1947—Peter J. Massey, resident manager, St. Regis Paper Co., Kalamazoo, Mich.

Department of Commerce Comments on Paper Needs

The U.S. Department of Commerce says demand for paper and paperboard for export packaging is not expected to increase in 1948. Reviewing possible effects of the European aid program on the pulp and paper industry, the report points out that no great change from recent levels is expected in the aggregate of United States exports during 1948. Any increases are likely to be in bulk goods, such as coal, grain, steel and machinery, indicating no material change in the demand for paper and paperboard packaging products for export.

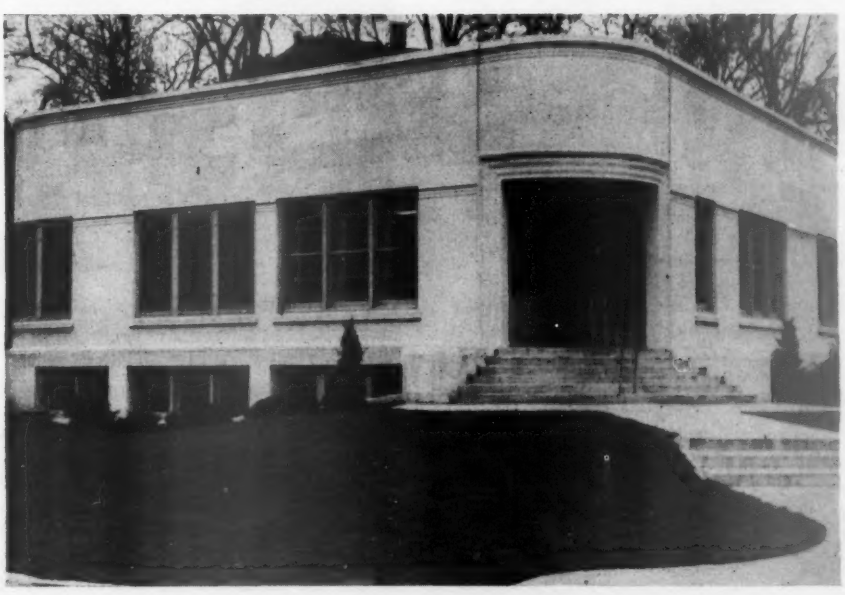
Domestic demand for pulp, paper, paperboard, and their products may continue slightly upward in 1948. However, with the expectation of a 4 to 5 percent increase in paper and board output in 1948, as new facilities come into production, the industry should be able to balance the supply-demand situation in many grades during the coming months, the Department believes.

Mexican Pulp Reported Shipped to U. S. Mills!

A surprise to many readers will be a Department of Commerce report which states that the new kraft mill built at Atentique, Mexico, near Guadalajara, by Cia. Industrial de Atentique, S. A., shipped 39 carloads of pulp to the United States in a recent month. Usually, the commerce in pulp is in the other direction.

FOX RIVER PAPER CORP. OFFICES

Here is the new modern office building of Fox River Paper Corp., which was completed last year. It is just across the street from the Fox River mills in Appleton, Wis., the address being 401 South Appleton. In this building are offices of E. A. Oberweiser, President; P. C. Wesco, Vice President in charge of Sales; David E. Oberweiser, Vice President and Treasurer; William E. Roberts, Vice President and Secretary, and P. V. Park, Purchasing Agent.



Portable Sawmill Used to Balk

PROGRESS IN ALASKA

A small portable sawmill is being rushed to Alaska by the so-called Timber Development Corp., a company which was organized in the law office of Richard G. Green, 9 Rockefeller Plaza, New York City, apparently as another move in an effort to establish prior claim to the vast timber stands which the U. S. Forest Service has been endeavoring to sell to experienced pulp and paper industry operators in the United States in an effort to establish a profitable pulp or paper industry in the territory.

James E. Curry, whose New York law firm has offices next door to the Green firm, at 10 Rockefeller Plaza, and who is well known as a lobbyist in Washington, D. C., has been sending frequent "instruction" to two Indian tribes in Alaska regarding action they should take in order to stymie the efforts of the Forest Service.

Indian claims have been advanced by Kasaan and Kake Indian tribes, one in each of the two timber areas which the Forest Service is now trying to promote for private industries. The Timber Development Corp., whose incorporators are members of the staff of the Green office, was called a $20,000,000 concern which has been given exclusive "cutting rights" in the timber areas by the Indian tribes, according to Mrs. Ruth Bronson, who claims to have Cherokee blood and is secretary of the National Congress for American Indians. The law firm of Curry, Cohen and Bingham (including James E. Curry) has been retained by the National Congress of American Indians.

A portable sawmill, of course, is hardly the kind of equipment a thriving pulp mill will require if it is to operate in Alaska. At least one, and possibly two, of these portable sawmills have been ordered by the so-called Timber Development Corp., and presumably would be set up in each of the pulpwood areas set aside by the Forest Service for auction.

AT LAST REPORTS, SALE WAS "ON"

As this issue went to press, the U. S. Forest Service in Washington, D. C., advised PULP & PAPER that auction sale of 1½ million cubic feet of government timber in the Petersburg-Thomas Bay area of Alaska is "still on" for 2 p.m. on Feb. 18 in the Chief Forester's offices in the capital.

Twice before in the past four months, auction sales have been postponed because suitable bids were not formulated. Postponements came just shortly before the sales were scheduled.

Some Southern California newspapers, the D. & F. Co. of Los Angeles, headed by Emmett Dougherty, and other associates were preparing a bid on this unit before its postponement in October. It was postponed because of the withdrawal of some of the group and to give time for reorganization of the bid.

This mill, industry men who have toured Alaskan possible sites say, would be located on the channel just outside Thomas Bay and east of Petersburg. Or it might be built inside Thomas Bay, which is quite deep although the mouth of the bay is comparatively shallow.

Name is Selected

In order to preserve the name for a possible future sulfite market pulp operation in the vicinity of Ketchikan, Alaska, the Ketchikan Pulp & Paper Co. (of Seattle), was incorporated for $250,000 under the laws of the state of Washington.

Western pulp interests, who possibly would be associated with some eastern paper mills, in the Alaska venture, would use this name if they decide to file a bid for the so-called Ketchikan "unit" of government timber which is scheduled to be sold by auction on April 14 in the offices of the U. S. Chief Forester in Washington, D. C.

In the same place, auction sale of the Petersburg-Thomas Bay timber unit is scheduled to take place on Feb. 18. A Southern California newspaper publishers' group and other associates had withdrawn a previously formulated bid for this unit.

Both of these auction sales have been postponed because of withdrawal of tentative bids or the failure of any bids to be prepared in time.

Although a so-called Timber Development Corp, organized in New York by attorneys claiming authority from Indian villages in Alaska, have made written demands that portions of this timber must be bought from them, instead of the government, apparently these claims do not have interested parties greatly worried. Senator Hugh Butler of Nebraska, chairman of the senate committee on public lands, advised **PULP & PAPER** that the deal involving the Timber Development Corp., based on aboriginal Indians "rights" to Alaskan resources, is not legal.

Willamette Flood Disrupts Production

The early January high water of Willamette river resulted in some disruption of the pulp and paper mills at Oregon City Falls. Crown Zellerbach Corp.'s mill at West Linn shut down completely for two days, Jan. 8 and 9, resuming operations on Monday. The Hawley Pulp and Paper Co. mill at Oregon City was somewhat curtailed for two days but No. 4 machine, the large newsprint unit which produces about two-thirds of the plants output, did not stop production at any time because of high water.

Peak heights of the water at the upper locks was 17.2 feet as compared to peak of 16.5 in 1945, 16.2 in 1946, and 10.3 for calender year 1947. Flood stage is reached at 12 feet.

PAPER and paperboard production for the January-November period of last year reached an estimated 19,278,000 tons, which is equal to production for the entire year of 1946.

NEENAH PAPER CO., Neenah, Wis., is calling attention to the fact that 1948 will be its 75th anniversary with an attractive legend in color at the bottom of company stationery.

IN INDUSTRY NEWS (left to right):

GEORGE L. CLARK, formerly at the Springhill, La., mill of Southern Kraft and more recently assisting in construction of the new LongLac kraft mill of Kimberly-Clark Corp., Shreiber, Ont., is now participating in process engineering for the new Coosa River Newsprint Co., to be built and operated by Kimberly-Clark in Alabama. It will have a sulfate pulp mill. Mr. Clark's headquarters are with Sirrine & Co., engineers, Greenville, S. C.

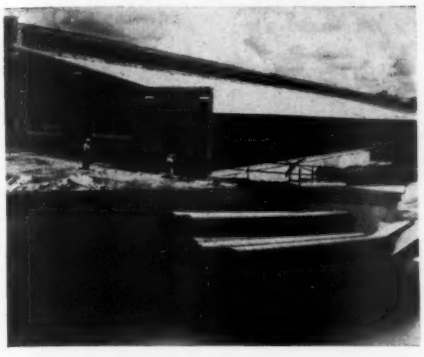
R. A. MONTEITH, Director of Paper Division of Personal Products Corp., who has been elected a Vice President.

HARRY J. FARRA, native of Wilmington, Del., has been appointed a Sales Engineer for The Moore & White Co., Philadelphia machinery manufacturers. He formerly headed paper machinery sales for Lobdell Co., and was with Hercules Powder Co. during the war.

H. R. "BOB" HEUER, a Superintendent at Weyerhaeuser Timber Co., sulfite pulp mill, Longview, Wash., holds the distinction of being a past Chairman of two different divisions of the Superintendents Association. He recently received certificate showing he was 1929-30 Chairman of the N. Y.-Canadian Division. From 1933-35 he was first Chairman of the then new Pacific Coast Division.

SOUTH CAROLINA MILL

Becomes More Important Producer



NEW BUILDING AT HARTSVILLE, S. C., where spiral tubes, including cores for paper rolls, will be made, and below are examples of the tubes which are waxed to exclude moisture. They were used to cast concrete pillars in wartime military camps.

Left to right—JAMES L. COKER, President and Gen. Mgr.; CHARLES W. COKER, Vice Pres. and Director of Purchasing (also directs personnel and traffic), and RICHARD G. COKER, Sec'y and Chief Engineer.

In keeping with other old-time southern paper mills, Sonoco Products Co., Hartsville, S. C., which has been turning reclaimed paper into useful items for the world's cotton mills, is engaged in an improvement program that will place it in a far more important status than prior to the war. In addition to stepping up its equipment to 200 ton per day basis, Sonoco is now making the installations to supply 100 tons per day of .009 semi-chemical hardwood pulped board on the market.

Sonoco, characteristic of the family-tradition type of mill, lays great stress upon close employe relations; and, there is nothing undone in that field by the management.

Hartsville, S. C. (pop. 5399) took its name from the pioneer Thomas Hart but drew its economic life from the sagacity and initiative of Major James L. Coker who moved there from Society Hill following the Civil War. In 1888, the town site was laid out and railroad connection built. Major Coker had a hand in this and subsequent founding the Bank of Hartsville, Hartsville Cotton Mill, Hartsville Oil Mill, Carolina Fiber Co., and Southern Novelty Co.

The Carolina Fiber Co. was established in 1890 by Major Coker and his son, James L. Coker, Jr. It produced butchers paper from the sulfite process from 1895 to 1926 but finally quit that process because it could not bleach the product. It produced semi-chemical nine point board and butchers paper after 1926.

The Southern Novelty Co. was formed in 1899, chiefly to manufacture paper carriers for the textile industry. When Major Coker died in 1918, his son Charles Westfield Coker became president, serving until his death in 1931. James Coker III, was then elected president by the directors.

In the meantime, in 1923, the company's title was changed to Sonoco Products Co., and its operations enlarged to include manufacture of all kinds of cylindrical and conical paper products for various industries including cores for electrical purposes. The company operates five plants at Hartsville, (S. C.), Rockingham (N. C.), Garwood (N. J.), Mystic (Conn), Lowell (Mass.); a subsidiary, Sonoco Products Company of Canada, Ltd.; and an affiliate Textile Paper Tube Company, Ltd., of Romiley, England.

In 1941 the Carolina Fiber Co. was merged into Sonoco and a general revamping program for production facilities. The Sonoco plant became No. 1 Mill, the Carolina plant, adjoining, became No. 2 Mill.

The general program has included the expansion of machine room space and installation of additional machines in No. 2 mill; the construction of a new building to accommodate an expanded spiral tube manufacturing equipment; a new engineering building to accommodate a machine shop equal to any in the South; entire remodeling of the pulp plant to produce semi-chemical pulp with a fourdrinier to make nine point board; and the general all-around re-alignment of facilities and installation of equipment to outfit a mill producing 300 tons per day of paper and its products.

Sonoco started the war years with three machines running, respectively 96 inches, 80 inches, and 96 inches trim. Absorption of Carolina Fiber Co. in 1941 brought No. 4 machine an 108-inch trim fourdrinier subsequently converted to a cylinder machine. Machine No. 5, which trims 80 inches, started production in September, 1946, and No. 7 (which has everyone's drier rolls and trims 92 inches) began in December of the same year. The No. 6 machine, which trims 92 inches and has 43 Sandy Hill driers and Cleveland Worm & Gear Co. (Cleveland, Ohio) drive, started producing paper in March, 1947. Total production of paper from these seven machines is 200 tons per day. The first three machines are in No. 1 mill, the original Sonoco installation; the balance in No. 2 mill, basically, the old Carolina Fiber Co. location.

Serving these seven paper machines are: six Shartle hydrapulpers and two old holland type beaters; six Monarch jordans; one Emerson jordan; 1 poney (or coney) jordan; and eight Miami jordans. No. 1 and No. 2 mills each have an Oliver United saveall. The Miami jordans are replacing the older equipment as are also the Shartle hydrapulpers.

A seventh Shartle Hydrapulper was recently received and is now being installed. The Hydrapulpers are replacing the beaters, and they are served with Shartle conveyors for waste paper. "With some of the junk waste paper during the war, we don't know what we would have done without the Shartle Hydrapulpers," said President Coker.

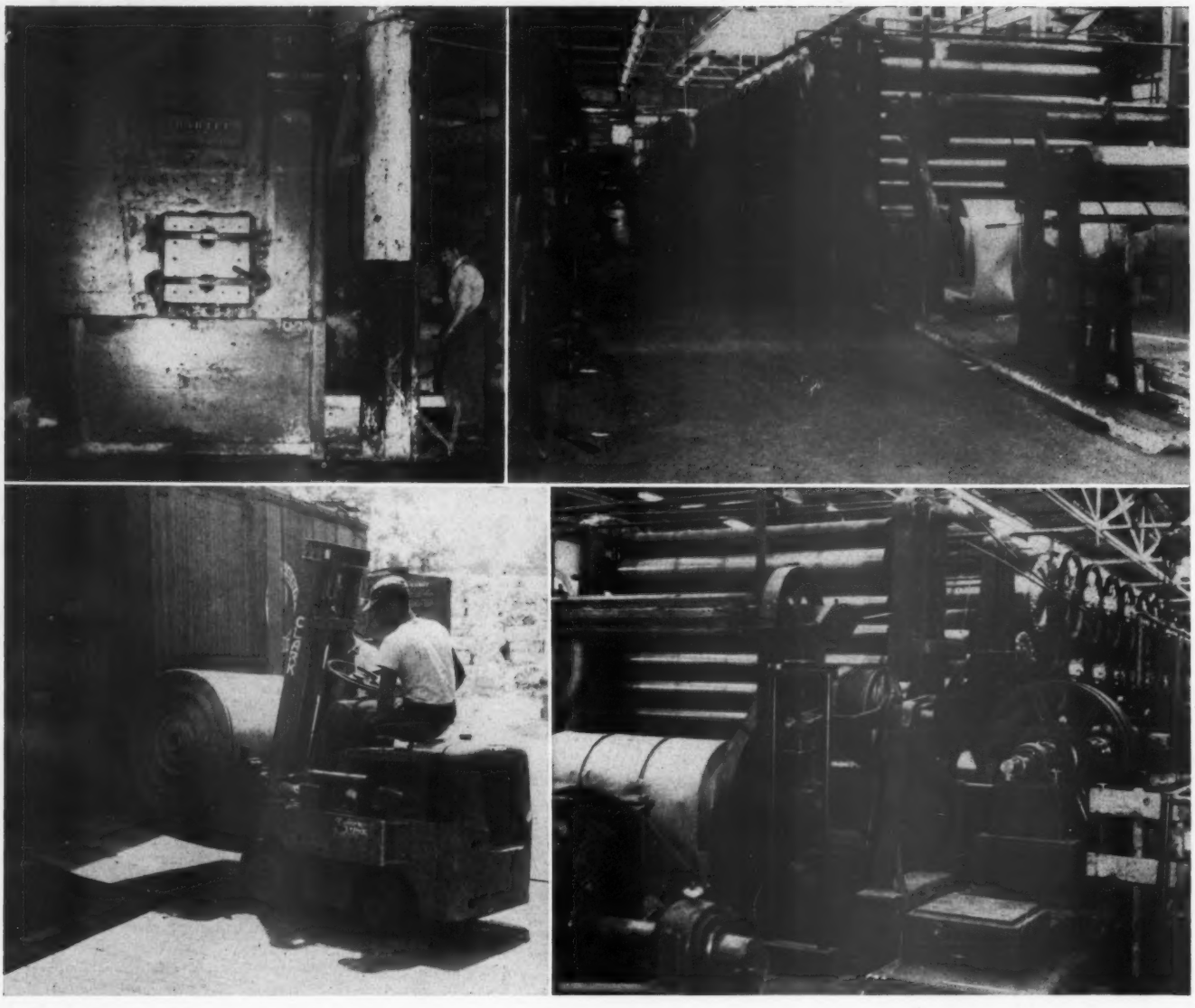
When Sonoco started the installation of additional paper machines in the Carolina plant, that part was rebuilt, a process involving doubling of size. Now, a new addition in process of construction to accommodate No. 8 machine measures 325 feet in length. At one end (west) there will be a shipping department, to be housed in a part of the structure measuring 118 by 45 feet, the basement of which will accommodate a machine shop. A beater room 100 by 30 feet will be on the east side.

No. 8 machine, a fourdrinier trimming 132" will be a Bagley & Sewall on the dry end; and Downingtown wet end. It will cost Sonoco $1,800,000 as part of its $2,500,000 1947 program. The machine is aimed at completion in April, 1948. It will produce 100 tons per day, mostly nine point corrugating board from semi-chemical pulp produced from southern gum wood.

The output of this machine for the next 15 years has been contracted for by the Ohio Boxboard Co., Rittman, Ohio, and Hankins Container Co., Cleveland, Ohio.

When No. 8 machine comes into production, the plant will need 40 to 50 additional men to make up the shifts per day. Since the Carolina company used to make butcher paper and nine point from gum wood a number of the personnel are already familiar with the operation.

In order to furnish the new machine, the old Carolina pulp mill is being revamped. The beater room capacity will be enlarged and three 12-foot Shartle Hydrapulpers



NEW EQUIPMENT AT SONOCO'S mill in South Carolina (photos by PULP & PAPER):

Upper left shows one of the seven Shartle-Dilts Hydrapulpers.—"We don't know what we would have done without them," said President Coker.

Lower left—A Clark Tructractor lift truck made by the Clark Tructractor Div., Clark Equipment Co., Battle Creek, Wis., in use at Sonoco. It makes possible cheaper and faster handling of rolls, the company officials stated.

Both pictures at right are views of the new No. 6 machine which trims 92 inches and has 43 Sandy Hill dryers.

will be added with Jeffrey conveyors designed for batch operation. Stock chests of the horizontal circulating type with Shartle Agi-Flo pumps will be added. Shartle Jordans will be added.

In the revamping of the Sonoco mill, Roderick O'Donoghue, 420 Lexington Avenue, New York, is consultant engineer.

Part of the work involved in plans to produce semi-chemical pulp includes moving the wood yard across the creek, extension of the railroad tracks to provide 2000 additional feet of which 500 feet will be alongside a flume that will carry pulp wood to the chipper. The chipper, too, is being moved with the yard.

Plans do not overlook such items as shipping ease, and extension of shipping platforms are expected to pay for themselves in a few years.

The new spiral tube building will draw its paper from No. 2 machine, brought by Clark Tructractors through a tunnel underneath an adjacent spur track. The paper will progress through the spiral tube manufacturing process to wind up on a shipping platform flanking the structure. The savings in handling are expected to pay for the building in 5 years.

The company's viewpoint on the new Clark Fork Lift Truck is that: "These lift trucks will also be used to load paper into box cars for shipment to our other plants. A study made of the methods of handling paper indicates that cars can be loaded much faster with the lift trucks than by hand. The method is also cheaper. When this new procedure is working it is expected that a considerable saving will be realized from handling the paper in this manner. The savings will be realized by faster handling and by less damage to the paper. For quite some time we have had considerable waste due to crushed deckles and it is expected that this new method will completely eliminate damage to the paper rolls."

The trucks are also to take baled waste paper to storage and then from storage to the beaters.

Like many another business that is handed down in the family, Sonoco is keenly aware of employee relationships. In the early days, of course, the employee was intimately known to the company's principal executive. As the operation has expanded, a determined effort has been made to continue the close personal relationships. The mill's monthly newspaper not only carries all the personals inherent in a good country weekly, but also carefully detailed explanations of any and all changes effected, including results anticipated. An interesting company policy is the publication in this paper of the annual report showing the money coming in and how distributed. This annual statement publication was said to be highly effective in promoting good employee relationship.

Other forms of conventional employee-company relationship, of course, are in

force. There is the insurance, credit union, Old Timer clubs, recreation activities that include a lake resort, a library, cafe, with reasonably priced food, Safety contest prizes, idea awards, and a "hot" lunch wagon that takes food to the job.

An interesting feature in the mill is the broadcasting of music over a public address system. This program is put on twice each shift and when the shift is changing. The programs are popular in the mill but the office employees asked their circuit be cut out. The 9 a.m. program is given over to hymns, which have proven popular.

Of 718 employees who entered the armed forces, 423 returned to the mill. The Hartsville mill has about 1400 employees in all.

A week's vacation with pay is given each employee who has been with the company for five months to five years. Employees having over five years with the company receive two weeks vacation with pay.

A most interesting factor in maintaining close relationships between personnel and ownership is a "Sonoco Advisery Board" which is composed of 10 representatives elected by employees and 10 named by management. Almost every question involving employee relationships is brought before this board for discussion and recommendation.

The company starts each child born to an employee with a $5.00 savings account deposit. Currently it has been urging employees to get as much advantage as possible from the present cycle of good wages and full time work by investing in savings bonds.

Sonoco executives are active in local and state activities:

James L. Coker, company president, is President of the Board of Trustees of Coker College, and President of the Bank of Hartsville.

Charles W. Coker, company vice-president, is a director of the National Tuberculosis Association and president of the State organization.

Richard G. Coker, company secretary, is a member of the South Carolina Commission of Forestry.

Personals

SOUTH

E. L. KURTH, president of Southland Paper Mills, Lufkin, Texas, turned the first spadeful of earth in the construction of a new hospital jointly financed by local industries. The hospital, costing an estimmated $800,000, was dedicated to the late J. H. Kurth, Sr., S. W. Henderson, Sr., and other pioneers.

RUSSELL F. ERICKSON, assistant resident manager at Rayonier's sulfite pulp mill in Fernandina, Fla., and previously plant engineer, has been named resident manager, succeeding James T. Sheehy, who has been transfered to the Pacific Northwest for liaison work between there and the New York offices. Mr. Erickson, graduate of the University of Minnesota in 1932, has been engineer with M. & O. Paper Co., George F. Hardy & Son, and H & W Co.

JAMES L. COKER, president, Sonoco Products Company, Hartsville, S. C., has been elected a member of the board of directors, National Association of Manufacturers, to represent South Carolina. The Sonoco Company has been affiliated with the national organization for ten years and Mr. Coker has been most active, having served as a director in 1944 and 1945.

DR. M. L. TAYLOR, technical director of Union Bag & Paper Corp., Savannah, and four fishing mates recently made one of the biggest catches in Savannah region waters on record or otherwise—more than 200 fish, all landed within seven hours. Large trout, school bass, stag bass and sheephead were in the catch, which reputedly started a traffic jam of cats from all over southern Georgia.

RECENT VISITORS at the Gaylord Container Corp.'s mill at Bogalusa, La., where much is going on, were GEORGE W. HILL (left) application engineer for Westinghouse Electric & Mfg. Company, and W. M. EMMONS (right) Westinghouse switch gear expert for the Atlanta, Ga., district.

ART KUEHN, assistant manager of the bag mill at Bastrop, La., ranks as top golf player of the widespread Southern Kraft Division, International Paper Company. Kuehn won his honors in a golf tournament—the 13th annual event—played among 131 amateurs and pros in an eight-state tourney.

WILLIAM M. LEHMKUHL, for many years manager of the New Orleans plant of Flintkote Company and recently manufacturing manager of the company with headquarters at East Rutherford, N. J., has become assistant vice-president of Masonite Corp. Mr. Lehmkuhl's duties will be in the production division, with Chicago as headquarters. Masonite operates a large pressed wood fiber hardboards plant at Laurel, Miss.

H. E. HORNBERGER, who was identified for 35 years with the Gulf States Paper Corp., Tuscaloosa, Ala., and predecessor company, has joined the Ad-Mat Co, an associated organization of Mobile Paper Mill Co. Mr Hornberger became associated with the E-Z. Opener Bag Co. in Decatur, Ill. and later was plant manager and printing operations manager in southern mills.

WITH THE PASSING in South Bend, Ill., Dec. 20 of Frank Brewer, the southern paper industry lost one of its pioneers. Born in 1857, Mr. Brewer joined H. E. Westervelt and O. L. Hammond in 1887 in operation of the Springfield Paper Co., Springfield, Ill. In 1916, Mr. Westervelt was in New Orleans and heard about the paper mill that had been built at Braithwaite, downstream about 30 miles, to use sugar cane refuse. Operations were suspended. On Mr. Brewer's advice the plant was purchased and operated as E-Z Opener Bag Co. Subsequently operations were concentrated at Gulf States Paper Corp., Tuscaloosa, Ala., where Mr. Brewer was superintendent and then general manager. Mr. Brewer retired some years ago.

R. W. BURNETT has become paper mill superintendent of Crossett Paper Mills, a division of Crossett Lumber Co., Crossett, Ark. He succeeds Carl Plumlee who joined Macon Kraft Co., Macon, Ga. A. B. Moore, formerly in technical service, became asstistant paper mill superintendent. A. W. Duskin was named director of technical service.

LEONARD WOMBLE, of Union Bag & Paper Corp., Savannah, hooked a drive from the Mary Calder golf course at Savannah which landed in a freight car moving out of the Union Bag yard. The news has been broadcast by radio and written word, making Mr. Womble quite famous, speculating on whether his ball landed in Canada or stayed in the U. S.

GEORGE CLARKE, who left International Paper Co.'s mill at Springhill, La., a year ago to join Kimberly-Clark Corp. in Canada, is back in the south again at Greenville, S. C., where he is participating in the process engineering of the Coosa River Newsprint Co.'s $30,000,000 mill at Talledega, Ala. Mr. Clarke's headquarters are at Greenville, with Sirrine & Co., engineers for the Coosa job.

KEN COMPTON, for seven years assistant forester at Flintkote Company's meridian, Miss., plant where close to 100,000 acres are under management, has become assistant professor of forestry at the University of Missouri, Columbia. Mo. Mr. Compton says the University is not at the present equipped to offer a great deal in pulp and paper to students, but hopes "to correct that situation later."

CHARLES L. POST, senior salesman of Gulf States Paper Corp., Tuscaloosa, Ala., was honored by the company at a special dinner to commemorate his attainment of 50 years in the company's service. The dinner, attended by 125, was held at the Tuscaloosa Country Club.

PROF. CHARLES EDWARD HESTON, a Yale graduate, has been selected to organize a Forestry School at University of the South, Sewanee, Tenn. Up to the present there has been no college in Tennessee offering a forestry school. Sewanee is situated on a high wooded plateau just west of Chattanooga, Tenn., and has a 6000-acre hardwood timber tract for a forestry laboratory.

Modernization and Expansion

AT THILMANY'S MILLS

A program of improvement and expansion of operations at Thilmany Pulp & Paper Co., at Kaukauna, Wis., which began three years ago, is now reaching its final stages. This program has been of more than ordinary interest to the industry as a whole, and the kraft industry in particular, because of the past record of this company for originality and ingenuity in the field of engineering.

In the current activities at Thilmany, engineering skill and originality are no less evident that they have been in the past.

A greater part of a new No. 10 machine —a Yankee Fourdrinier which will add about 35 tons a day to the mill's production of kraft papers—has already been erected and this is the last of series of important additions to the plant since 1945. The others are:

A new 120,000 lbs. per hour, 1,000 hp., 600 p.s.i. Babcock & Wilcox Stirling type boiler.

A new modern boiler feed water treating plant.

The Venturi scrubber, a new type of gas washer for stack gases, originally developed at Thilmany and now licensed to Babcock & Wilcox for commercial plant size installations.

A new Fourdrinier section for No. 8 machine.

Nine Morden Stock Makers replacing heavy equipment and credited with improving the sheet on two machines where they are already used. They are installed ahead of No. 6, No. 9 and No. 10 machines.

A new control laboratory—one of the most up-to-date in the industry.

The whole story isn't told, of course, in just listing these prominent items, but in the detail of planning and thinking that went into the selection of equipment and the way it will be used.

For instance, the new No. 10 machine, which will be capable of operating up to 1,000 feet per minute on kraft specialties, has been carefully planned from the stock preparation end to the finished rolls. Ahead of the machine, along with the Mordens and Vortex beaters will be 12 Bird Dirtecs, a centrifuging method of removing dirt from stock.

The paper machine itself is principally produced by Beloit Iron Works but important parts are contributions of other companies.

Second Chemstone Headbox

The Valley Iron Works, of Appleton, for example, has done special custom work for it, including a new type of Chemstone headbox with a slice, according to specifications worked out with Thilmany engineers. This is the second Chemstone headbox installed at Thilmany. Chemstone material, produced by Johns-Manville, was also used in a new headbox for No. 8 machine installed early in 1946. This type of headbox is described as "slime-proof" and it is smooth and easy to clean, as it is constructed without any pockets or square edges. All corners are rounded and it has a special wax-treated inside surface.

At a mill like Thilmany, where a great amount of color is used, in papermaking, it permits fast washouts for change of paper being produced. The Chemstone, of course, will neither rot nor warp.

The Fourdrinier section is principally Rice Barton Corp. and Valley Iron Works equipment and the Fourdrinier wire will be 136 inches wide and the paper produced will trim 124 inches. This compares to 120 inches trim on the No. 9 and the No. 8 machines. No. 9 machine, incidentally, was the last entire new machine installed at Thilmany prior to the new No. 10, the No. 9 machine having started up in 1942.

The Rice Barton dual breast roll was selected for No. 10 machine. This consists of a lower large breast roll, which takes the biggest stress of the wire, and a smaller one above it which takes less stress. Thus, by eliminating sagging of paper here, the first table roll can be much closer to the top breast roll than would otherwise be the case.

A 12-foot diameter Yankee dryer with other dryers 60 inches in diameter are provided for this new machine. Also a Beloit calendar stack and a high-speed automatic Beloit reel and winder.

The drive for No. 10 will be a direct drive with a Westinghouse turbine.

A fully automatic central control board, largely with Bailey meter equipment, and typical of the new central controls being installed in mill power houses, will serve the new B & W boiler.

The Venturi Scrubber

The new Venturi scrubber for reclaiming dust formerly lost in the stack gases from the sulfate recovery plant, is shown in a new picture with this article. It is located at the lower mill of the Thilmany operations which are located on an island in the Fox River. When the pilot plant installation of this scrubber had "made good," an article and drawing in the Engineering section of the 1947 North American Review Number of **PULP & PAPER** gave a complete description of it. Copies of that issue are still available.

The dust so recovered amounts to 15,000 to 20,000 lbs. per day and the chemicals are re-used in the pulping liquors. Reasonable power and installation cost are features of this new type of gas washer. The Thilmany installation is removing a little more than 90% of the dust in gases which pass through it. A cubic foot of these gases contain a trillion particles of dust from 4-millionths to 40-millionths of

DESCRIPTION OF OUR COVER PICTURE

Our cover picture is a new air view of Thilmany Pulp & Paper Co., one of the important specialty kraft paper operations of the world. The picture shows clearly how its properties extend over a large-sized island in the Fox River at Kaukauna, Wisconsin.

In the upper part of the picture, at the narrow end of the island, is shown the "Upper Mill." This is now largely a converting operation. The main offices are here, too.

Between the "Upper Mill" and the "Lower Mill" (the latter operations dominate the picture in the lower foreground) can be seen extensive stacks of pulpwood. There is more wood off to the left and in the foreground. Straddling the river at the left is the Kaukauna city 5,000 kwa power plant built about six years ago, one of the four power plants. The mills take about 65 per cent of city power. A new city plant is being built up the river and when completed, the expanding mill will probably continue to take about the same percentage of city power.

In the concentration of buildings of the "Lower Mill" in the foreground, the new Venturi scrubber for reclaiming dust in stack gases, is located at the foot of the high stack at the right. The No. 9 machine installed in 1942 is in the lower left center of the group of buildings with a lighter colored building for the new No. 10 machine.

More wood is seen in front of the "Lower Mill." There is about 60,000 cords of wood showing in this picture; mostly jackpine from Minnesota and Michigan, with lesser amounts from Wisconsin, Canada and even Montana. The circular basin for the new water filtration plant can be seen along the lower left shore of the island.

CHARLES R. SEABORNE, Vice Pres., Sec'y and General Superintendent of Thilmany Pulp & Paper Co.

MARTIN DOWNS (left) is Technical Director at Thilmany Pulp & Paper Co. ARTHUR M. SCHMALZ (right) is Assistant General Superintendent of the Thilmany mills.

an inch in size. Stack gases are accelerated to a speed of 170 miles per hour or more in the Venturi (a type of contracted and expanded throat). Through a 25-inch diameter, 50,000 cu. ft. of hot, dust-laden stack gases pass per minute.

At the throat, coarse streams of scrubbing liquor are sprayed into the gases. Energy of the gases atomizes the liquor and this liquor, containing dust particles in solution, is thrown into a cyclone chamber and pumped back into the pulp mill and returned to the furnace. The cleaned gases pass through a powerful draft induced by a fan driven by a 350-hp. motor and are exhausted into the stack.

In November, the Lake States TAPPI section made a tour of the Thilmany mill to see the scrubber in operation in connection with one of its regular monthly meetings.

The Thilmany company, whose engineers developed the scrubber, licensed Pease, Anthony & Co. of Waltham, Mass., to reproduce it and that firm, in turn, has arranged with Babcock & Wilcox to construct other similar commercial size installations.

The new water feed plant at Thilmany, was described in this magazine in December, 1945, and it was completed over a year ago. It is a 5,000,000 gallons per day plant, built in a place where stone had been quarried for a government canal on the Fox River back in 1852.

The water treating plant has a Dorr Co. coagulation and sedimentation system. Water from the river is run through a coarse screen, to a flocculator basin and then to a clairifier tank. Sludge is pumped back in the river and clear water goes to bleach plant and paper machines.

Anniversary of Wire Manufacturing Observed

At a recent dinner honoring veteran employes and commemorating the 100th anniversary of the paper mill wire cloth industry in the United States, William E. Buchanan, president and general manager of Appleton Wire Works, traced the industry's history through the past century. The event was held in the Conway Hotel in Appleton.

In 1848, the first Fourdrinier wires were woven in the U. S. by his ancestor, Robert Buchanan, and John MacMurray, Mr. Buchanan told the guests.

Among 46 veteran employes introduced were John Brown, who at the age of 15, began employment with Appleton Wire Works when that company started up its operations in Appleton in 1896. Next oldest employe is Frank Rubbert, who joined the company at the age of 18 in 1897. Henry G. Meyer and Carl Lange went on the payroll the following year.

Vice Presidents R. H. Purdy, George J. Maye and Smith McLandress attended the affair. Mr. McLandress came from Glens Falls, N. Y., where he represents the company. Ben E. Natwick, Pacific Coast representative, came to Appleton from Camas, Wash., to attend.

A PULP & PAPER editor took this picture of the new commercial full-size installation of the Venturi Schubber kraft dust recovery system installed at Thilmany Pulp & Paper Co., and described in this article. The conventional type Pease-Anthony scrubber and scrubbing liquor tank are at the right. Note the high velocity contracted and expanded Venturi type throat in middle fore part of picture. Compare this with the model pilot plant picture shown in page 53 of the 1947 North American Review Number of PULP & PAPER.

Kalamazoo Hercules Lab Adds Coating Machine

The Paper Makers Chemical Department laboratory of Hercules Powder Co. at its Kalamazoo, Mich., plant has added an exprimental paper coating machine to its equipment. The machine is being used for development work on all phases of paper coating and paper treatment, to promote better printing and lithography.

Research chemists of the PMC Department, working with a new cellulose chemical, developed a paper coating which increases strength of paperboard, and makes paper more resistant to oils and waxes. This resulted in higher quality gloss printing and savings in ink and waxes, they said. This cellulose chemical, first produced in 1946, also adds internal strength to paper.

Location of Wallboard Plant Is Unsettled

Location of the new wallboard plant planned by the H. R. MacMillan Export Co. in British Columbia is still indefinite, although sites in the Cowichan district of Vancouver Island are reported to have been investigated.

The proposed $3,000,000 plant will not be built on the Fraser River, adjacent to the parent company's subsidiary Canadian White Pine and MacMillan Industries mills, as was at first intimated.

81-Year Old Dryers

E. E. Flood, president of Pacific Paperboard Co., Longview, Wash., would be interested in learning of a contest seeking out (and awarding prizes) the oldest dryer rolls in the United States and still producing paper. His claims for entry consists of 12 John L. Seaverns 28" rolls built at Worcester, Mass., in 1866. Pacific Paperboard bought these rolls from the "Old Red Mill" at Montvale, Conn., about five years ago, and they are now used for drying newsprint.

Machines Are Installed At Columbia River Mills

The vegetable parchment machine and two printing presses, formerly in operation at California-Oregon Paper Mills, Los Angeles, Calif., went into production at Columbia River Paper Mills, Vancouver, Wash., recently.

The Los Angeles mill, formerly a division of Columbia River Paper Mills, was sold to Container Corp. of America early in 1947 and several pieces of the plant's processing machinery has subsequently been moved to the Vancouver plant. This includes five printing presses, two waxing machines, and the vegetable parchment machine. All of this equipment is scheduled to be in production about the first of '48. Waxing equipment includes one dry wax and a wet wax machine.

This transplanted equipment is housed in a new 80x210-foot machine room of brick and steel. Dr. Walter Hoffman, formerly superintendent of the California-Oregon mill is in charge of the parchment division as parchment superintendent.

NEPCO FOUNDATION became an operating educational and charitable corporation for inhabitants of Wisconsin Dec. 5 when John E. Alexander, president and general manager of Nekoosa-Edwards Paper Co., Port Edwards, Wis., presented Walter A. Radke, banker and officer of the foundation, with a check for $54,000 and the deed to Nepco Court, a new $90,000 eight-apartment building in Port Edwards. Nepco Foundation is assured continued support from the paper company. Vice Presidents Neil Nash and Charles Reese are among incorporators.

Also a gift of $27,300 was voted to the village of Port Edwards by directors of Nekoosa-Edwards Paper Co. to be used for the acquisition of property in connection with village beautification.

Collegians Told of Opportunities

AWAITING THEM IN PULP AND PAPER INDUSTRY

Pacific Coast Section of TAPPI established a precedent for the pulp and paper industry at the Jan. 16 meeting held at Camas, Wash.

The interest-crammed meeting presented to sixty guests, engineering and forestry students and professors from seven Pacific Northwest colleges and universities—an insight to the opportunities awaiting the young technical and engineering graduate for careers in Pacific Coast pulp and paper industry.

This unique program developed by the executive committee of Pacific TAPPI was sparked by TAPPI Vice President William R. Barber, technical director of Crown Zellerbach Corp. Featured for the technical students was a carefully segmented presentation of the industry, given by young accomplished key executives of the industry, most of whom were only a few years senior to the student guests.

As a result of the "in-sight of the industry's workings" given the young men with technical training, a favorable impression was indicated by keen interest displayed by the guests. Many expressed their immediate interest and some are already showing serious consideration of tying their professional future to the pulp and paper industry.

Crown Zellerbach provided conducted tours of the Camas mill and later was host of a pre-meeting lunch at Crown Willamette Inn.

The TAPPI meeting began after lunch, with Dr. J. L. McCarthy, University of Washington, chairman of Pacific Coast TAPPI, presiding, and it broke all past records for attendance for Coast meetings of this type with 216 registered. Welcome was extended the group by A. G. Natwick, assistant resident manager at Camas and dean of the Crown Willamette Paper School.

The seven institutions which sent delegations were: University of Washington, Washington State College, University of Idaho, University of Oregon, Oregon State College, Portland University and Reed College.

Following presentation of a paper entered in the 1948 Shibley Award Contest, "Statistical Analysis for Plant Operation," by Tom Nicholson, Simpson Logging Co., Mr. Barber stressed the industry's need for getting its deserved share of leading Pacific Coast graduates in order that the progress and welfare of the industry continue. He attributed a substantial part of the tremendous accomplishments of the Coast industry in forest management and production of quality pulps, paper, and paper products to college graduates.

Dr. W. W. Moyer, director of research, Crown Z Corp., presided over the panel

WILLIAM R. BARBER, Tech. Director, Central Research and Technical Dept., Crown Zellerbach Corp., who sponsored program for university students given by TAPPI at Camas.

presentations. He interpreted "opportunity" as the sound chance of producing or creating items of benefit to society, for which "pulp and paper offers one of the best there is." He said starting pay is on a par with other fields; the industry is far-sighted—by planning 80 to 100 years in advance for resources, as well as by carrying out modernization programs.

Highlights of the panel presentations by topic heading follow:

1. *Importance of a Perpetuated Supply of the Industries' Basic Raw Material*

Clarence Richen, chief forester, Crown Zellerbach Corp., pointed out that as far back as 1884 wood was used for pulp and paper and has continuously continued to increase in use. The Pacific Northwest is now furnishing one-fifth of the nation's pulp requirement; the mills are basicly sound, and represent an industrial high in investment per ton of manufactured product.

Mr. Richen told the group that it is reassuring that thousands of acres of fast growing young trees in the Pacific Northwest are currently producing additional volume of this natural resource, wood. However, these small-tree forests do not show in inventory figures, but for pulp they can be considered merchantable. He suggests thinning as early as 40 years and subsequently every 5 to 10 years. Without thinning about a third of the volume is lost through competition. Several companies are carrying on thinning for pulp and paper manufacture, and much more of this is possible.

Ed Heacox, chief forester of the Longview branch, Weyerhaeuser Timber Co., stated the primary objective of the industrial forester is first to produce commercial timber crops to meet requirements of the forest owner and secondly to stabilize forest yield at the highest practical level. Objective industrial foresters are directing their efforts along four principal lines of activity — Silviculture, protection, regulation, and utilization, each of which is essential to perpetuation and stablization of timber supply.

He pointed out that silvicultural consideration of new forest crops have to date received insufficient attention, due largely to the fact that problems of virgin timber forestry have in the past been more pressing. However, he said, "As the proportion of young timber increases, industrial foresters will also be increasingly concerned with methods of second-growth management design to increase both the quantity and quality of the products of these stands."

2. *Importance of a Perpetual Market for the Industry's Products and Opportunities for Expanding Its Markets.*

Maurice E. Kinsey, Central Chemical Laboratory, Rayonier Incorporated, discussed the magnitude of the uses and sales of pulp products.

The wood pulp industry of the U. S., having long been "big business," now has products each year valued at $1.5 billion and "today there is every indication that the demand for wood pulp as a raw material will continue to increase," he said. A major factor to the growth of the industry is attributed to expenditure of large sums for continuing research that has kept ahead of pulp production through development of new and diverse uses for wood cellulose and wood pulp products. Among the developed products are the dissolving pulps used as the raw material for making rayon, cellophane, plastics, photographic film and paper, lacquer bases, sausage casings, and numerous other products. Estimated consumption of dissolving pulps in the U. S. for last year was 560,000 tons and demand still exceeds supply. Among the latest uses for purefied wood cellulose is in the production of carboxymethyl cellulose, still in early stages of development, he said.

The speaker concluded:

"There is much still to be explored in the field of wood cellulose chemistry—and also in all phases of the production of highly purified pulps. Some of you may elect to make a career in one of the cellulose consuming industries; others may choose the pulp producing field. In either field, one sees ahead expanding opportunities and great potentialities."

R. G. Mispley, assistant technical director, Central Research and Technical Department, Crown Zellerbach Corp., brought to the attention of the group the magnitude of uses and sales of paper products. The paper industry, now the sixth industry of this country, and crowding fifth place, is second as a consumer of chemical raw material. Production in 1946 according to Mr. Mispley, totaled 19,179,355 tons of paper, including paperboard. However, consumption of paper exceeds production by almost 20%, the difference being virtually the amount of newsprint imported from Canada.

PARTICIPANTS IN UNUSUAL TAPPI Meeting held in Camas (left to right):

R. I. THIEME, Technical Director, Soundview Pulp Co., Everett, Wash., who collaborated with E. O. ERICSSON, Technical Director, Puget Sound Pulp & Timber Co., Bellingham, Wash., on paper on role of chemical engineer.

RAYMOND HATCH, Research Director, Pulp Div., Weyerhaeuser Timber Co., Longview, Wash., who discussed field of research.

R. P. WOLLENBERG, Chief of Engineering Division, Longview Fibre Co., who discussed presented paper on role of plant engineer.

DR. JOSEPH McCARTHY, Chairman of Pacific Coast TAPPI and University of Washington faculty member, who presided.

DR. WENDELL W. MOYER, Director of Research, Crown Zellerbach Corp., moderator of round table discussions on opportunities for college men in the industry;

ROBERT G. MISPLEY, Assistant Technical Director of Crown Zellerbach Corp., who discussed importance of paper uses;

ERIC O. ERICSSON, Tech. Dir., Puget Sound Pulp & Timber Co., who helped prepare paper on role of Plant Chemical Engineer.

3. *The Industry from the Viewpoint of the Plant Chemical Engineer.*

This section of the program was presented by R. I. Thieme, technical director, Soundview Pulp Co. The material having been jointly prepared by him and Eric O. Ericsson, technical director, Puget Sound Pulp & Timber Co., who was unable to attend the meeting.

"The pulp and paper industry as a whole is comprised of companies most of which are small," according to Mr. Thieme, "compared to some of the well known manufacturers in the oil, chemical, automotive and steel industries. For this reason developments have not been as spectacular or as well advertised. Perhaps for this reason the opportunities for the technical graduate in the pulp and paper industry are not so well known. The size of an organization, however, is no criterion of the opportunities it offers and the graduate will early realize that the span of time allotted him will impose limitations on the scope of his activity. In a large organization he will find himself specializing in, perhaps, one field of endeavor whereas in the smaller organization he will be acquainted with several. It is a matter of individual preference but the problems, accomplishments, and the rewards will be much the same. Because of the chemical nature of the industry, chemical engineers form a large division of its technical personnel."

Applications by which the chemical engineer can make contribution in the pulp and paper industry includes lowering of production costs, improvement of product quality, and development of new products. Of the young chemical engineer, the industry expects that he produce results of practical value to the company and that he bring to the organization "traits of honesty, loyalty, enthusiasm and cooperation."

4. *The Industry from the Viewpoint of the Plant Mechanical Engineer.*

R. P. Wollenberg, chief of the engineering division, Longview Fibre Co., said:

"The typical mill has a moderate size engineering staff and the mechanical engineer must become a jack of all trades, dealing not only with mechanical problems, but also with foundations, structures, electricity, metallurgy, instrumentation, methods of engineering, as well as engineering economics and engineering contracts."

However, the engineer is afforded a large number of opportunities to apply engineering science and thereby make real improvement in plant operation, he said. Such opportunities are not so prevalent in most industries, added Mr. Wollenberg.

Normally the young technical graduate starts by working in the mill until familiar with the process. Subsequently he may be transferred to the drafting room and begin work on specific jobs, which might be layout and calculation of steam piping for a new recovery boiler, redesign of converting machinery, foundation problems, etc., he said. With experience in design work an engineer is qualified for assignments in some supervisory capacity in the maintenance end, and such advancement is common in the mills.

5. *The Industry from the Viewpoint of Research—"*

Raymond S. Hatch, director of research, Pulp Division, Weyerhaeuser Timber Co., presented this phase of the industry to the group. He pointed out that manufacture of pulp by the sulfite process has until recently been of major importance in the Pacific Northwest. This is largely due to the fact that readily-pulped species (western hemlock and true firs) are considered of secondary importance to the lumber industry. But with increased use of kraft pulp in manufacture of paper where the special properties imparted by a kraft pulp are of a distinct advantage, kraft pulping has begun to assume increasing importance in this section, he said. He added that by this process, it is possible to pulp many other species not readily pulped by the sulfite process, and the attention of species not previously used is increasing.

Mr. Hatch said the energy developed in the form of heat and power is probably the next important factor in the manufacture of pulp. He pointed out that steam in the Northwest has long been generated by burning waste wood as hogged fuel. Much of this wood is suitable as raw material for manufacturing pulp. If converted into pulp, greater values can be realized than by using it as fuel alone, he said.

"If lime was replaced by magnesia as a base for preparing sulfite cooking acid, both the magnesia and sulfur could be recovered by burning in a form in which they could be combined to form fresh cooking acid," said Mr. Hatch. "This process, familiarly known as 'the magnesia base system', is now being installed at the Longview mill of the Weyerhaeuser Timber Co. and is expected to be in operation early this year. By using magnesia as a base not only are the cooking chemicals recovered, but the steam and power necessary to run the mill are obtained in the burning process. The recovery of chemicals, heat and power, in both the kraft and the sulfite process, may now be considered an accomplished fact.

In conclusion Mr. Hatch stated:

"It may safely be said that there is no modern industry which requires and demands more diversified technical training of a high order than does the pulp and paper industry. The days of art in either field have long passed and only through the use of the most modern tools which science has to offer can we expect this industry to render its greatest service to humanity."

At the customary dinner session, following the afternoon program, Howard Morgan, manager of the pulp division, Weyerhaeuser Timber Co., was scheduled to be the principal speaker. However, he brought along Sir Herbert Gepp, managing director of the Australian Paper Manufacturers, Ltd., "from over the horizon," and Morgan made his contribution to the program by introducing Sir Herbert as the principal speaker. (See article on Pape 60 describing Sir Herbert's world-wide tour of pulp and paper mills.)

TAPPI Sections May Elect Own Committeemen

PACIFIC COAST TAPPI has proposed direct election by each TAPPI section of its own representative or representatives on TAPPI's National Executive Committee. Probably this would eliminate the presentation of a nation-wide slate of nominees for committeemen by a central nominating committee.

Copies of a letter from President W. W. Gillespie of Bogalusa, La., national president of TAPPI, was distributed at the Camas meeting in which he said that, substantially, he agrees with the Coast section's "case" and will present its suggestions to the Executive Committee meeting in New York Feb. 23.

Hawley Mill Deal

Sale of Hawley Pulp & Paper Co. at Oregon City, Ore., to three west coast newspapers — the Portland Oregonian, Oregon Journal of Portland and the Los Angeles Times — has been reported in progress by unofficial sources.

NEWEST MILL IN WEST

Complete Wood Utilization

Newest pulp manufacturing enterprise to start production in the Pacific Northwest is the 165-ton unbleached sulfate mill of Bloedel, Stewart & Welch, Ltd., at Port Alberni, B. C., on the west coast of Vancouver Island.

This mill, modern and efficient in every detail, was completed during the past summer, but its operation was postponed until later in the year owing to delays experienced by the British Columbia Power Commission in transmitting power to the mill from the new hydro-electric plant at Elk Falls on the Campbell River, on the island's east coast.

Actually, the mill was ready to produce pulp in August, when the first experimental "blow" was put through the digester. The period intervening between the plant's completion and the availability of adequate waterpower was profitably employed in making the necessary adjustments and "tune-ups" preparatory to normal operation and in training and familiarizing the crew with equipment and process.

Opening of the Port Alberni mill marked the entry of Bloedel, Stewart & Welch, Ltd., into one more important division of wood utilization and a significant milestone in the history of an organization which has been a leader in the Pacific Northwest forest industries for more than 35 years.

Building of the pulp mill is regarded as a logical step in the development of the company, which had its genesis back in 1911 and has followed a consistent program ever since in the production and utilization of west coast timber.

The enterprise was started as a private company under British Columbia charter by J. H. Bloedel of Seattle, who still continues as chairman of the board, and the late General J. W. Stewart of Vancouver, B. C., and the late Patrick Welch of Spokane, Wash., contractors who had participated in some of the largest construction undertakings in Western Canada. Mr. Bloedel had previously been interested in a number of logging and sawmill undertakings in the Puget Sound country.

Active head of the company is Prentice Bloedel, son of J. H. Bloedel, who is president, and who has "carried the ball" for the pulp mill project ever since its original conception several years ago.

J. H. BLOEDEL, of Seattle, Chairman of Bloedel, Stewart & Welch, Ltd., father of Prentice Bloedel. Over 20 years ago he envisaged the present trend toward more complete utilization of wood resources in the Far West. He has been an outstanding pioneer in Pacific Coast timber industries in both U. S. and Canada.

PRENTICE BLOEDEL, President of Bloedel, Stewart & Welch, Ltd., who traveled many thousands of miles and spent several years in investigating processes in planning the new market sulfate pulp mill on Vancouver Island.

Wood Utilization Goal

Apart from the market possibilities, one of the major considerations of the Bloedel organization in planning a pulp mill for Port Alberni was the desire to make the fullest possible economic use of the company's wood resources. Several natural conditions, such as abundance of suitable timber, adequate logging and adjacent sawmill facilities, together with tidewater location and accessibility to newly created hydro-electric power installations by the British Columbia government through its power commission, provided the company with an initial advantage. The problem was to make maximum use of it.

As soon as the company decided to go ahead with the pulp mill project Howard A. Simons, one of the country's best known pulp mill engineering consultants, was engaged to make a survey and design the mill. An extremely thorough examination of pulp mills and wood-using facilities was carried out, in this country and abroad, with regard to the application of modern and effective processes to the conditions present at Port Alberni. Having determined upon a basic plan, Mr. Simons was instructed to proceed with the design of the mill and to carry the design into execution.

Some of the new and modern features are:

1. Provision for chip blending of separate chip species, controlled from digester floor.
2. Direct and indirect cooking but designed for indirect cooking for the complete cooking period.
3. Automatically controlled cooking cycle.
4. Automatic control of stock pump discharge from blow tank regardless of head of stock in blow tank.
5. Continuous knot refinement and washing ahead of brown stock washing.
6. High density storage direct from washers, without additional equipment.
7. Provision for consistency control and blending ahead of screens.
8. Provision for blending five or more cooks ahead of the drying machine.
9. Lime kiln designed for low fuel consumption and use of lime rock for make-up instead of lime.
10. Chemical storage with provision for automatic regulated continuous feed.
11. Hydraulic log barkers, large and small, of a new design, with nozzles set in a ring that rotates around the log.
12. A series of chip storage silos with revolving plate feeders below steel hoppers.
13. Unique arrangement of mill for expansion and low operating cost and ease of maintenance, both in regards to accessibility to shops and in arrangement of equipment and other features.

Fundamentally, the pulp mill gives effect to an integrated processing program that has made Port Alberni a model operation for complete wood utilization.

Instrumentation

One of the outstanding features of the mill is the complete instrumentation, and in this respect it has few equals. The instruments provide automatic control of consistency and flow, to an extent which is ordinarily done by hand control; and, of course, there is the usual complete installation in connection with the boiler and other parts of the mill. There is a fairly complete line of pressure-regulating and steam flow instruments and also automatic regulation of Baume at several points in the liquor system. In addition, there is automatic control of cooking, relief and many points of automatic lever control and recording.

One of the factors that set the Bloedel mill apart from the conventional is that

it is designed to run, and is running on 100% sawmill waste wood; and in this connection it is also unusual to convey chips over such a long distance as is done in the company's conveyer system from the sawmill.

Another feature not found in most mills is the large chip storage provided—sufficient for a full week's run at full production, with segregation of the three species—hemlock, Douglas fir and cedar.

Weightometers are provided on the chip conveyor feeding the digesters so that fairly complete information will be available on wood charges and total amount of wood used by the mill. This is also true of the fresh salt cake make-up, which is weighted over another weightometer.

The brown stock washer installation is different from the conventional setup in that there is three-stage washing with three washers, single stage on each washer; and the vacuum is provided entirely by barometric leg effect instead of the usual vacuum pump.

Wood Supply

Most of the wood required for the pulp mill is in the form of trims, slabs or rejects from the Bloedel, Stewart & Welch sawmills, but large quantities of heretofor waste wood will also come in from outside operations in the Alberni region.

When in normal production the pulp mill will produce about 50,000 tons of pulp annually, and, as about two units of chips are required to produce one ton of pulp, approximately 100,000 units of chips will be needed to keep the mill in full operation.

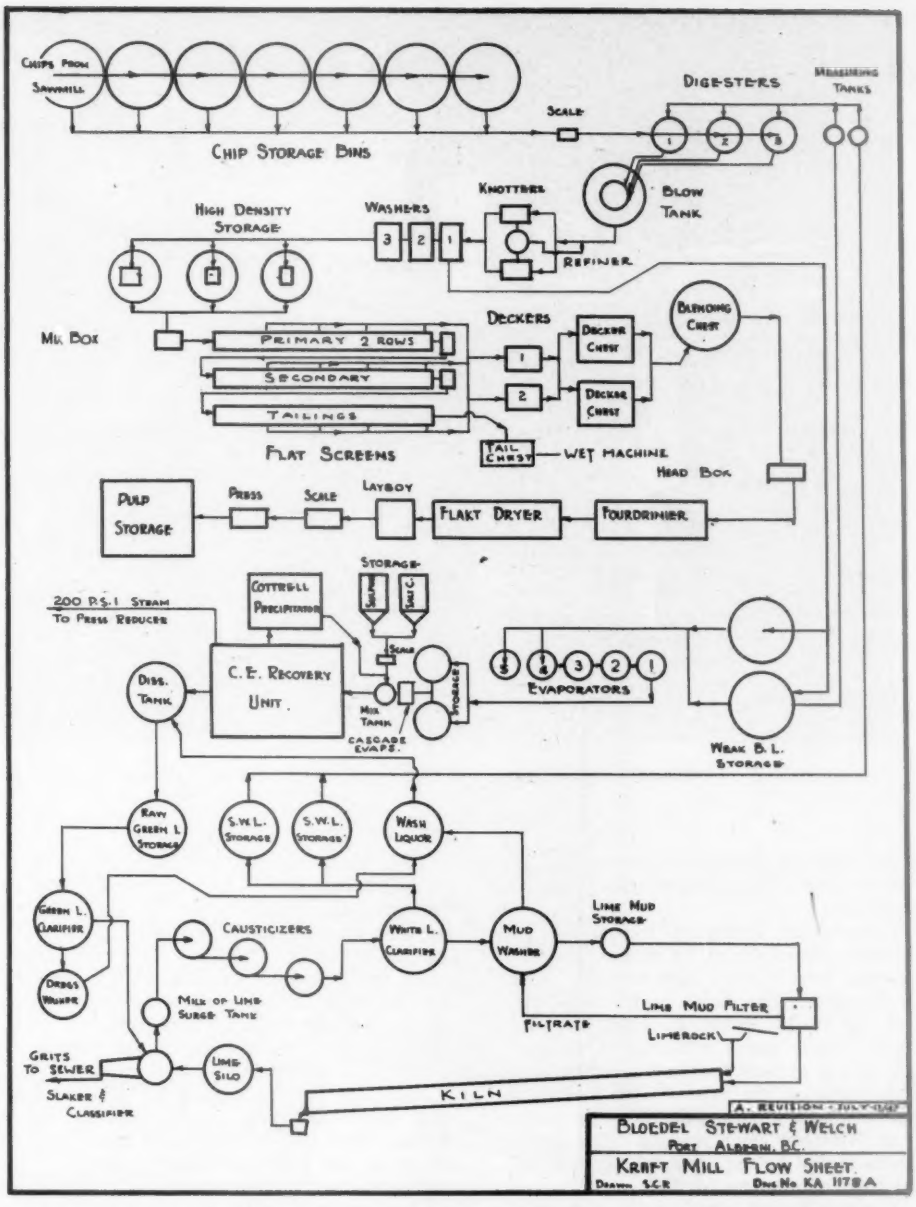
The mill's output is being marketed in the United States through the Mead Sales Co., 230 Park Avenue, New York City.

Some changes are being made in the sawmill setup and it is expected that when these are completed about 150,000,000 feet of logs will be handled in the sawmills annually, and from this it is expected that about 90,000 units of chips will be available. This is roughly 10,000 units short of the pulp mill's requirements, and the difference will be made up of outside "waste" and small logs that are not handled directly in the sawmills.

Production of chips will also be modified temporarily until the company's two hydraulic barkers are in operation. At present only a slab barker is in use. During the interim, until the Bloedel sawmill setup is fully rounded out and the hydraulic barkers are running, slabs will be utilized from the company's Great Central sawmill and the Alberni Pacific Lumber Co. mill, which is located close to the Bloedel operations at Port Alberni.

The pulp mill will not be fully integrated with the Bloedel lumber manufacturing facilities until the company proceeds with its plans for another mill in the Port Alberni area to handle small logs exclusively. When this small-log mill is built, it is probable that the company's Great Central mill will be shut down and perhaps some of the equipment transferred.

The pulp mill will have adequate chip storage capacity with seven bins already built and provision made for an eighth.



This will provide sufficient accommodation for complete segregation of the chips by species, and the chips will be fed to the digesters as required to maintain a uniform combination of hemlock and fir. Cedar waste will not be utilized at present. However, the shingle mill operated by the Bloedel organization at Port Alberni will probably make more complete utilization of the cedar available, and surplus from fir and hemlock will always be much greater in total volume as well as in percentage, than cedar.

Three steel jackladders feed logs to the barking plant through which, eventually, all logs for the sawmill as well as the pulp mill will pass. The main log haul has a capacity for logs of an 81-inch maximum diameter, and was laid out according to designs prepared by Bloedel engineers. The two other log hauls are primarily for logs to and from the hydraulic barkers.

Hydraulic Log Barking

The large log haul goes directly through the main floor of the barking plant to the sawmill, although provision is made for kicking logs off as required before going the full length of the floor. Logs for barking are kicked off to either barker transfer and returned to the main log haul chain after barking.

Provision is made so that small logs not acceptable to the sawmill can readily be transferred direct to a 110-inch chipper. Barked logs can also be returned to the pond and logs can be separately fed to the barkers without interferring with the main log haul by means of two separate auxiliary log hauls running direct to each barker.

Ultimately it is proposed to bark all logs for the sawmill up to 50 feet in length. A 108-inch cut-off saw—one of the largest ever made and similar to that recently installed at the Powell River Co.'s new wood-handling plant—is a part of the equipment in this section of the plant.

Both the large and small hydraulic log barkers are of a new design, being of the ring type with nozzles set in rotating ring with the log passing through the ring in a

FOURDRINIER AND END OF FLAKT DRYER in operation at Bloedel, Stewart & Welch mill as the production of kraft market pulp begins.

fixed position instead of having the log rotate under the nozzles, as some other installations.

The smaller hydraulic barker has an internal clearance of 36 inches, but the average feed will be logs 8 to 26 inches in diameter. The large barker will take logs up to 72 inches in diameter. The water supply pump is being mounted on one of the present turbines and will furnish water at the rate of 1000 gallons a minute and a pressure that may be varied from 1100 to 1600 pounds. The lower pressure will be required for hemlock and the higher pressures for fir.

The slab barker, which was in use at the chip plant long before the hydraulic units were installed, takes slabs from two to 12 feet long. It will probably not be required when the other barkers are in full operation for sawmill refuse, but will then aid in the recovery of waste wood from outside sources.

Slabs from the sawmill come out in 40-foot lengths and pass through a set of slashers that cut them into 14-foot lengths. The wider slabs are split and those to be barked are sent along to the slab barker. Others go direct to the chipper feed.

There are four chippers including one 54-inch unit in the sawmill. In the main chipping plant are two 72-inch 6-knife chippers for handling slabs and 4-foot wood from outside. These are operated at 600 r.p.m., with two synchronous motors of 300 h.p. Then there is one 110-inch chipper for barked small logs up to 24 inches in diameter.

Slabs from outside the Bloedel sawmill move on a separate conveyer, being dumped by truck on a wide chain that carries them to the chipping plant.

From the chippers the chips move along to two chipper screens and then to the concrete chip storage bins at the pulp mill by a series of belts about 3400 feet long. In this operation a new type of revolving plate feeder system beneath a steel hopper has been installed similar to that at the Soundview Pulp & Paper Co. at Everett and the Puget Sound Pulp & Timber Co. at Bellingham.

Each bin has a capacity of 250 units and they have been built with sliding forms. They are 40 feet in diameter and about 60 feet high, of concrete construction with steel hopper bottoms.

On the way from the bins to the digesters the chips are weighed automatically by a Weightometer. The Weightometer can be set to automatic control for any given charge of chips. Control over the weight of chips, feed from the tanks and 42-inch conveyor belt delivery to the digesters is centralized in the digester building so that operators can determine the charge and regulate it in a minimum of time.

Handling of Chips

In the handling of chips a series of 24-inch belt conveyors with an aggregate length of 3,147 feet is operated. From the chip room adjacent to the sawmill the chips are conveyed to the storage room by a series of these belt conveyors, equipped with idlers, bearings and other auxiliaries, which move in a horizontal path to the chip storage room.

From there the conveyor is elevated at an angle of 18 degrees to reach the penthouse at an elevation of 70 feet, where the belt straightens out and runs along the top of the seven chip bins, requiring a total length of belt amounting to 280 feet of level travel across the top of the bins.

The chips are discharged into the various bins by a tripper operating on rails back and forth between the chippers. At the bottom of the bins is a series of rotary plate feeders whose function is to feed chips from the bins on to the belt which runs alongside the feeders. This belt is 42 inches wide and it proceeds horizontally for a length of 413 feet. From there the chips are fed from the horizontal belt to an inclined belt which takes the chips to the top of the digesters, where they are discarged by means of another tripper.

Although the conveyor system is similar to recent installations in the United States, it is unique for Canada in this respect, that while normally belt conveyor idlers employ side, or concentrating rolls set at an angle of 20 degrees, all idlers supplied on this installation have side rolls mounted at an angle of 45 degrees, the

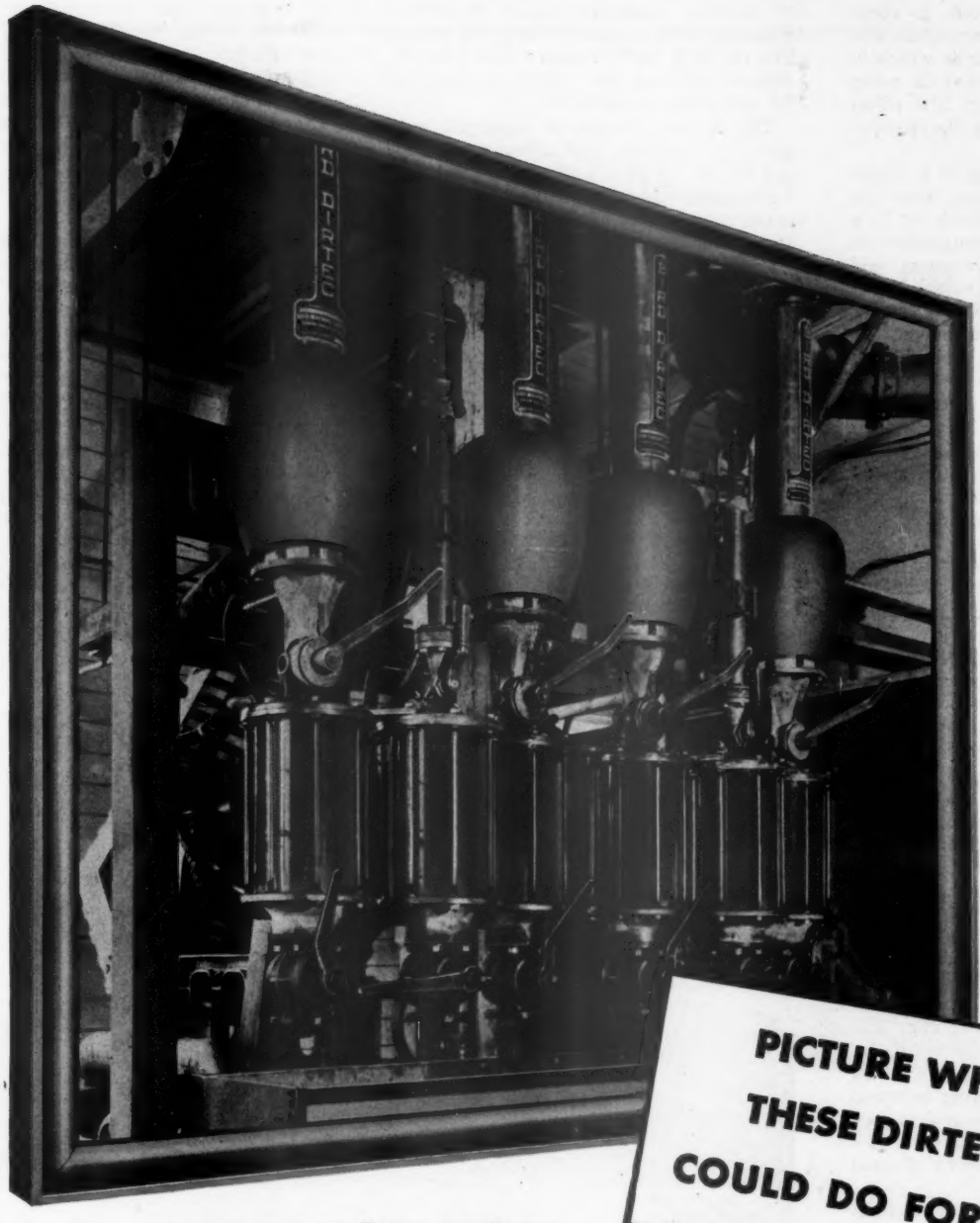
Pulp Preparation

There are three steel digesters, each of 4200 cubic feet capacity—possibly the largest units of their kind in a kraft mill on the west coast. In their construction a good margin for corrosion was provided.

The blow valves are operated by remote control motor. The forced circulation type blow tank is of standard design but big enough to hold three blows simultaneously.

High pressure dilution liquor is regulated by controls. The blow tanks have a cone bottom and an agitator inside the tank is calibrated to maintain the necessary consistency.

Stock from the blow tank is pumped to



PICTURE WHAT THESE DIRTECS COULD DO FOR *You*

A neat, compact Dirtec installation like this (the number of units depending on the volume of stock to be handled) does a wonderful job of whisking the dirt out of your stock and getting it out of the papermaking system for good and all.

The Dirtec does the job day in and day out at amazingly low over-all cost.

Ask us to show you what it can do for you.

BIRD MACHINE COMPANY

SOUTH WALPOLE • MASSACHUSETTS

the knotter screens, set ahead of the washers in an unconventional arrangement. The amount of stock pumped out of the blow tank to the knotters is automatically controlled by measuring the differential through a Venturi tube which in turn controls the speed of the stock pump through a hydraulic coupling. The effect is to reduce fluctuations in the suction head of the stock pump.

Rejects from the screen go to a disintegrator and are reintroduced into the system, not completely dissolved but in a form that will not cause congestion or other encumbrance in the washers and will permit the washing out of black liquor finally removed on low type flat screens, equipped with Dunbar drive.

From the knot screens the stock moves by gravity to a three-stage washer, located on the floor over the screen room. This is a counter-current brown stock (black liquor removal) washing system, consisting of three 8' x 12' vacuum washers with Impco type intermediate submerged repulpers, all arranged as one unit.

Hot water is added on the third stage with counter current flow throughout. Included in the equipment at this point is a foam breaker.

Black liquor flows to a tank outside the building, all the moving equipment, pumps and so on being inside.

Stock from the washers is shredded and goes over a belt to three high density storage tanks each with a capacity of about 35 tons. These tanks are designed to hold fir, cedar and hemlock stock. They are equipped with cone bottoms and agitators and density controls similar in general principle to the control system in the blow tank except that fresh water is added to the stock instead of black liquor. Blending is done before the screening.

Stock from the storage tanks is pumped in the established ratio of hemlock, fir, cedar to a head box with flat screen. The stock then flows over a series of 16 flat screens with wood vats equipped with 16, 14, 12 and 10 cut plates, flowing between two rows of four primary, one row of secondary and one final tailings screens—in other words, over 16 screens divided into four rows.

Two vertical pumps maintain a constant level and transfer stock from primary to secondary and from secondary to tailings screen lines. Subsequent thickening is accomplished by two 132-inch four-foot deckers with rubber-covered cooch rools.

The deckered stock is then dropped into stock chests equipped with propeller-type agitators and pumped from there to a blending tank set ahead of the machine. The stock chests are ceramic tile-lined, as are the white-water chests, machine stock chests and wire chests.

White water is discharged into a tank and used for re-diluting stock from the high-density chest. The overflow is used for the evaporator condenser.

Drying Machine and Chemical Plants

The drying machine is a Fourdrinier, with the wet end equipped with three rubber and bronze-covered press rolls designed to operate up to 1000 pounds pressure per inch, and controlled by air.

The drying section is a Flakt dryer of 13 sections, operating under 50 pounds pressure. The machine trim is 145 inches. The dryer is built in such a way that additional sections may easily be installed for additional production.

The drying section is equipped with automatic controls and automatic layboy and cutter.

Provision has been made for the automatic handling of sheet pulp over a belt and airfloat conveyer to a 600-ton press.

Causticizing is carried out with standard equipment consisting of the customary white and green liquor clarifier, white mud washer and green liquor dreg washer. Lunkenheimer valves are used in the causticizing process.

An unusual feature of the Bloedel mill is that it will burn its own lime rock instead of buying lime in the form almost universally utilized on the west coast. When the mill is in full operation it is expected that this lime rock will be quarried on the Alberni Canal at a location within a few miles of the mill—a step towards economy as well as complete integration.

The lime kiln is a 200 feet x 7 feet unit, with primary and secondary dust chambers. The steel stack is 100 feet tall. A sludge filter is installed adjacent to it.

In order to have an adequate supply of lime, there will be a 1000-ton pile of crushed lime rock in outside storage, and this will be fed into the back of the kiln with sludge.

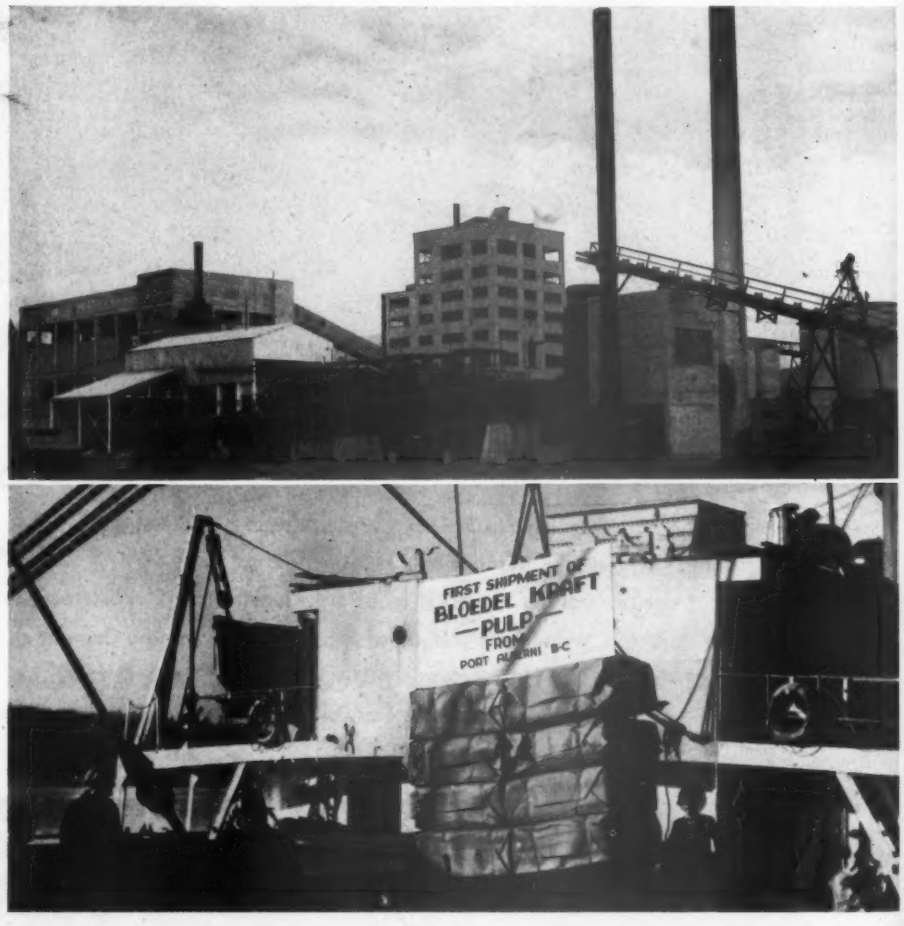
Two white liquor storage tanks will have a capacity of 16 hours' production. There are two black liquor storage tanks, one raw green liquor storage tank and one weak wash storage tank.

Power Facilities

Power for the pulp mill will be provided by the British Columbia Power Commission. In fact, Bloedel, Stewart & Welch are the first large commercial customer of the commission's new hydro plant at Elk Falls on the Campbell River, east coast of Vancouver Island.

Originally, power from Campbell River was to be available in the early summer of 1947, but the commission encountered various delays. Until full hydro requirements become available the mill will be operated on a substantially curtailed basis with temporary power facilities.

Power is to be brought across Vancouver Island to Port Alberni at 132,000 volts on a transmission line laid right across the forest and mountain wilderness separating the two coasts. The commission has its own sub-station at Port Alberni, just

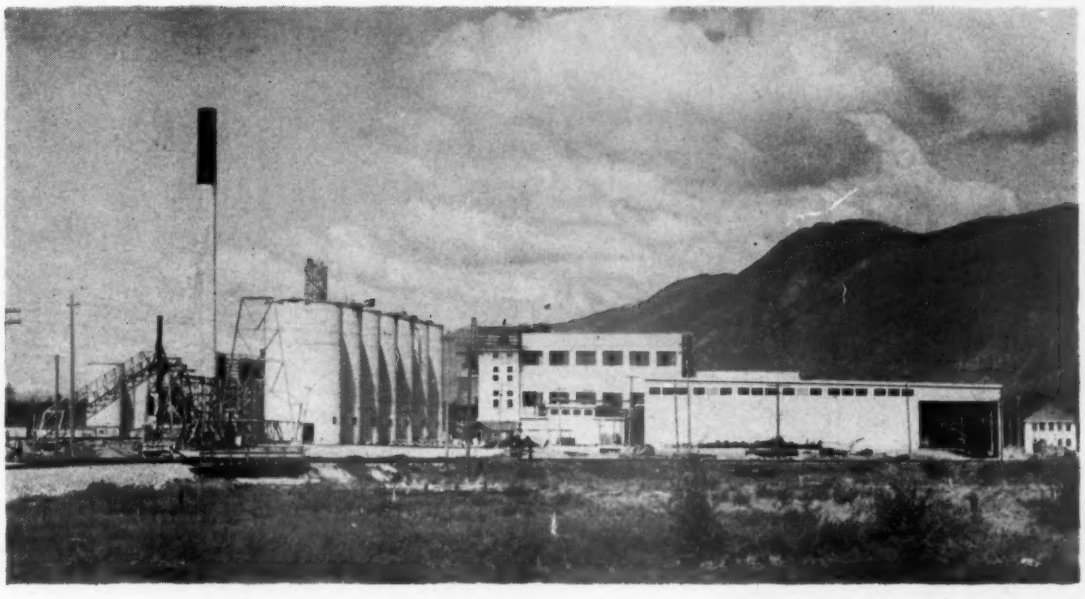


TOP IS GENERAL VIEW of new pulp mill at Port Alberni, B. C., where they have been pushing ahead with first production of pulp, despite the fact that some finishing touches—like windows—need to be done. At left is pulp mill. Recovery plant is in center. The long lime kiln shows in foreground. At right is Cottrell Precipitator and extreme right shows one of the chip silos. Below—First shipment of kraft pulp from this mill loaded on ship at Port Alberni, B. C.

Congratulations . . . .

BLOEDEL STEWART & WELCH LTD.

on the opening of the sulphate pulp mill
at Port Alberni



Carefully planned, skillfully executed construction will play its part in the efficient operation of this modern plant. B. C. Bridge and Dredging Co. Ltd., was entrusted with the entire construction program for this new enterprise.

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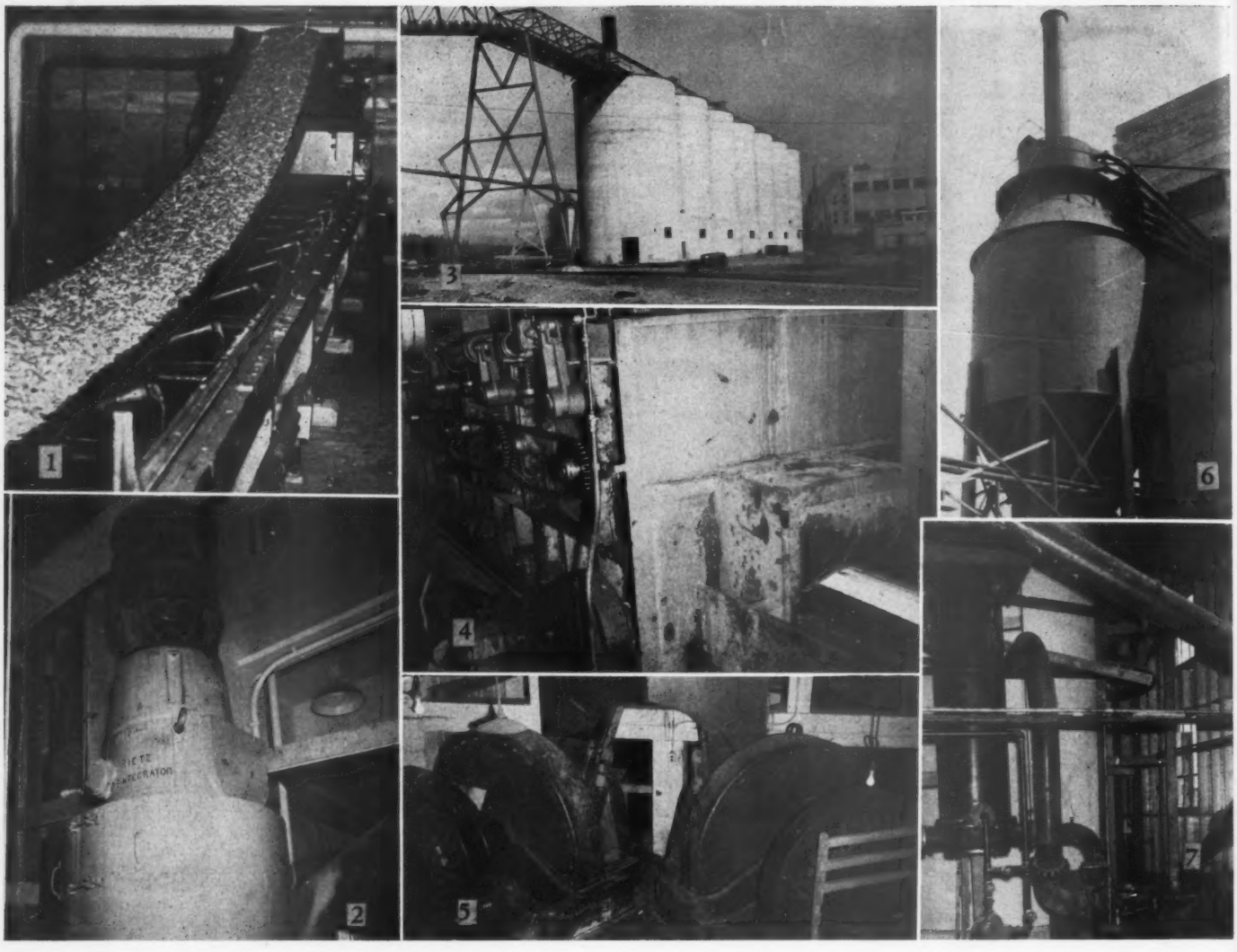


VIEW AT THE NEW PORT ALBERNI market pulp mill. These and other pictures taken at the new mill on Vancouver Island by **PULP & PAPER.**

1—Link-Belt conveyor carrying chips to point of feed at top of digester.

2—Rietz Disintegrator used in refining rejects from Jonsson knotters.

3—Seven chip bins or silos of concrete exterior with steel hoppers built by British Columbia Bridge & Dredge Co. and Dominion Bridge Co., effecting a new and improved method of storing and feeding chips to conveyors to digesters.

4—Slab barker, hydraulically debarking slabs, continuously fed, made by Canadian Sumner Iron Works. Note debarked slab emerging at lower right.

5—Sumner chipper driven by English Electric synchronous motors.

6—Blow tank.

7—Electric Steel Foundry Co. heater and circulating system.

across the road from the pulp mill, and the Bloedel company has its smaller substation in the heart of the mill layout to distribute the load to various departments.

Power will be stepped down to 12,000 volts at the Power Commission's substation and be distributed from the pulp mill sub-station at 2300 and 550 volts. It eventually will tie in with the power generated by the company's steam plant operated in connection with the sawmill. The pulp mill eventually will use about 3500 kilowatts.

Three 1500 KVA transformers are installed at the sub-station and secondary distribution will be protected by three 600-amp. circuit breakers. The sawmill steam plant presently operates at about 2300 volts.

The total connected load of the sawmill and pulp mill combined will be approximately 10,000 horsepower. An interesting feature of the power installation is that all feeder cables will be laid underground.

Chemical Recovery

The chemical recovery plant is designed according to the most recent developments in evaporation and burning of recovered black liquor. Weak black liquor from the three-stage washer is run to storage, and pumped to the evaporators. These units are quintuple effect, five-body vertical film type evaporators, concentrating the liquor from an initial 15% solids content to 50% solids with steam supplied at 40 pounds gauge pressure.

The heavy black liquor is pumped to storage and from storage to the recovery cascade evaporator where it is further concentrated to a solids content of 65%. This strong hot liquor is pumped to a cone bottom mixing tank and is mixed with salt cake and recovered fly ash from the precipitator in the required amounts as determined by analysis of the black liquor feed.

The liquor is pumped through a preheater and to the furnace nozzle, where the liquor is burned and the inorganic solids recovered as smelt. The recovery furnace is an "I" type unit with an output of appreximately 90,000 pounds steam per hour at a designed pressure of 600 pounds p.s.i. Soot blowers are installed to clean the tubes and deposit the fly ash either in the smelt or in the precipitator with a minimum of labor involved in its recovery.

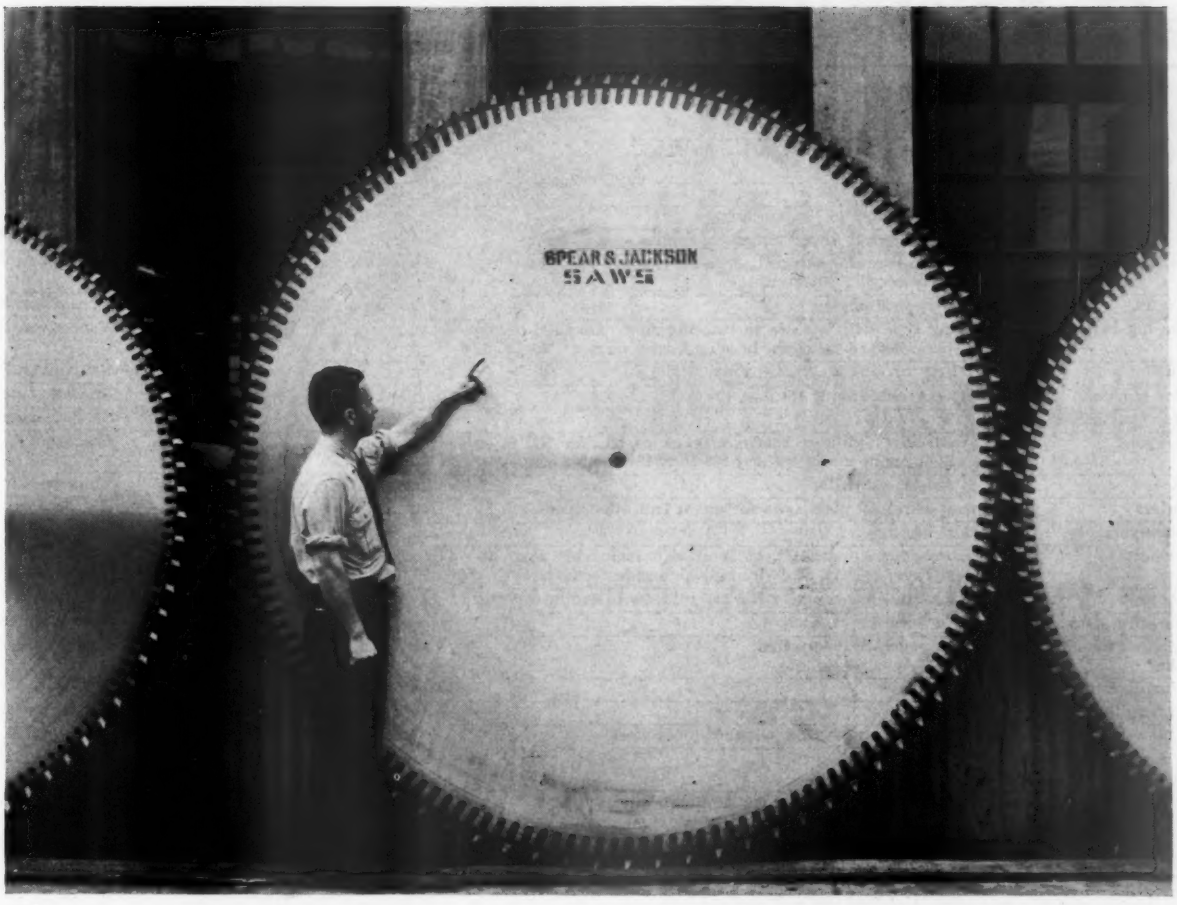
The furnace gases are led through the tube banks and down through the cascade or disc evaporators, and out through a Cottrell type precipitator to the stack. With this equipment loss of chemical is kept to a low figure and provision is made for the use of sulfur as well as salt cake to maintain the correct liquid sulphidity.

Smelt from the furnace drops to the dissolving tank and is dissolved in weal wash liquor from the recausticizing plant to form green liquor, which is then pumped to storage.

Plant Arrangement

The recovery and recausticizing equipment is housed in two main build-

(Continued on page 46)



One of the Largest Saws Ever Made

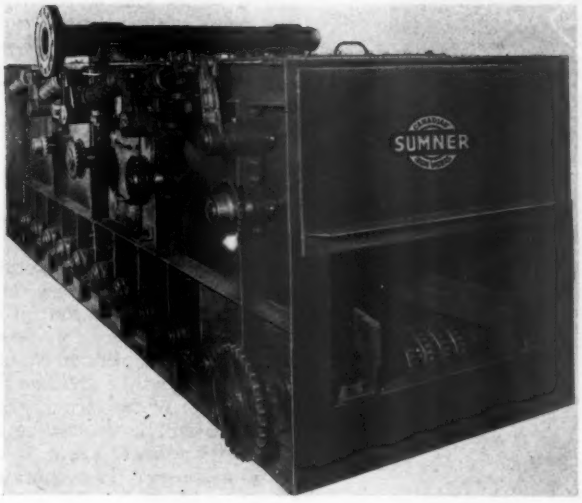
This 108-inch cutoff saw, manufactured in Vancouver, B. C., by Spear & Jackson (B.C.) Ltd., is operated in the new hydraulic barker system at the Port Alberni sulfate pulp mill of Bloedel, Stewart & Welch, Ltd.

SPEAR & JACKSON

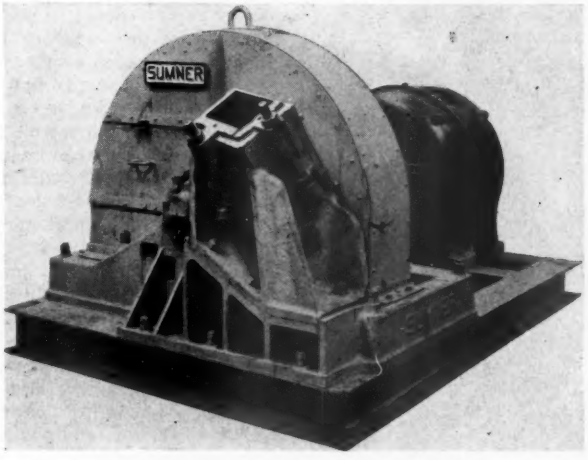
FACTORIES: EUGENE, ORE.; VANCOUVER, B. C.; SHEFFIELD, ENGLAND

LIST OF EQUIPMENT SELECTED FOR NEW BLOEDEL, STEWART & WELCH MILL

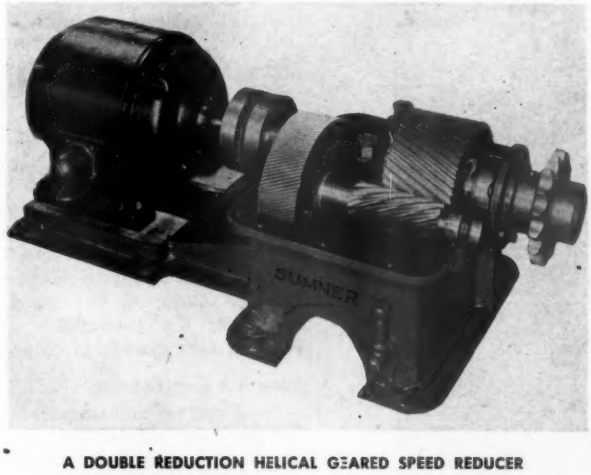
CONTRACT—MACHINE OR EQUIPMENT	SPECIFICATIONS	CONTRACTOR OR MANUFACTURER	CITY
Main contract for entire plant and concrete construction of chip bins.	40 ft. in dia., 60 ft. high.	B. C. Bridge & Dredging Co.	Vancouver, B. C.
Main log haul.	Handles logs up to 81 inches diameter.	Western Bridge & Steel Fabricators, Ltd.	Vancouver, B. C.
Log haul drives and gears.	Various.	Canadian Sumner Iron Works.	Vancouver, B. C.
Slab barker.	Takes slabs 2 to 12 feet long.	Canadian Sumner Iron Works.	Vancouver, B. C.
Various pumps.	Manufactured under Bingham license.	Canadian Sumner Iron Works.	Vancouver, B. C.
Chippers.	1 54-in. unit in sawmill; 2 72-in., 6-knife for slabs and 4-ft. wood; 1 110-in. unit.	Canadian Sumner Iron Works.	Vancouver, B. C.
Cut-off saws.	108-inch diameter.	Spear & Jackson, Ltd.	Vancouver, B. C.
Hydraulic log barkers.	Ring type with nozzles in rotating ring. Smaller barker takes logs 8 to 26 in. in dia.; larger ones up to 72 in.	Vancouver Iron Works.	Vancouver, B. C.
Digesters.	Three of 4200 cu. ft. capacity.	Vancouver Iron Works.	Vancouver, B. C.
Motors for chippers.	Two synchronous, 300 h.p., 600 rpm.	English Electric Co.	St. Catharines, Ont.
Motors for causticizing.		English Electric Co.	St. Catharines, Ont.
Belt conveyors.	With idlers, pulleys, bearings, take-ups, etc., for 3147 ft. of 24-in. wide conveyer and 688 ft. of 42-in. wide conveyer.	Link Belt Co.	Chicago.
Trippers.	Two self-propelled type.	Link Belt Co.	Chicago.
Chip feeders	Seven rotary plate type for chain and attachments.	Link Belt Co.	Chicago.
Flight conveyors.	For hog fuel.	Link Belt Co.	Chicago.
Conveyor belt	Sixty-four hundred ft. of 24-in. belt from chip room to storage; 1400 ft. of 42-in. belt alongside feeders.	Goodyear Rubber Co.	Akron, O.
Hopper bottoms for chip bins.	Each bind has capacity for 250 units (with sliding forms).	Dominion Bridge Co.	Vancouver, B. C.
Steel lime kiln stack.	One hundred ft. high.	Dominion Bridge Co.	Vancouver, B. C.
Weightometers for chips and salt cake.	Automatically controlled.	Merrick Scale Co.	Passaic, N. Y.
Heaters for digesters.		Electric Steel Foundry Co.	Portland, Ore.
Strainers for digesters.		Electric Steel Foundry Co.	Portland, Ore.
Yarway blow valve.	Remote control; lined with stainless steel.	Yarnall-Waring Co.	Philadelphia.
Controls for secondary distribution.		Cemco Electrical Mfg. Co.	Vancouver, B. C.
Controls for high pressure	dilution liquor density controls and sludge filter	The Bristol Company.	Montreal and Waterbury, Conn.
Controls for drying section of Fourdrinier and sludge filter.		The Foxboro Co.	Montreal and Foxboro, Mass.
Knotters.	Bird-Jonsson knotters.	Canadian Ingersoll-Rand Co. (Via Bird Machine Co.)	Montreal, Que. So. Walpole, Mass.
Hydraulic coupling.	To control speed of stock pump.	American Blower Co.	Detroit, Mich.
Reject refiner.	Rietz disintegrator unit.	Process Machinery Co.	San Fran., Calif.
Flat screens, deckers.	Equipped with Dunbar drive, washers; foam breakers; counter-current black liquor removal washing system; 3 8'x12' vacuum washers with Impco type intermediate submerged repulpers.	Sherbrooke Machineries, Ltd. (Manufactured in U. S. by Improved Paper Machinery Corp., Nassua, N. H.)	Montreal
Stock, white water, machine and wire chests.	Tile lined, equipped with propeller-type agitators.	Canadian Stebbins Eng. & Mfg. Co. (Stebbins Engineering Corp.)	Montreal. Seattle.
Drying machine.	Fourdrinier wet end, equipped with 3 rubber and bronze-covered rolls operating up to 1000 lbs. pressure.	Dominion Engineering Co.	Montreal.
Drying machine.	Flakt dryer of 13 sections, operating under 50 lbs. pressure.	Paper Mill Machinery Co.	Montreal.
Layboy and cutter.	Automatic.	Lamb Grays Harbor Co.	Hoquiam, Wash.
Press.	Six-hundred-ton Baldwin Southwark unit.	United Steel Corp. (Via Baldwin-Southwark Corp., Eddystone. Pa.)	Welland, Ont.
Causticizing units.	Including white and green liquor clairifer, white mud washer and green liquor dreg washer.	The Dorr Company.	Montreal and New York.
Valves for causticizing.		Lunkenheimer Co.	Cincinnati, O.
Motors for causticizing.		English Electric Co.	St. Catharines, Ont.
Lime kiln.	Two hundred ft. by 7 ft. with primary and secondary dust chambers.	Traylor Engineering Co.	Allentown, Pa.
Sludge filter.		Oliver United Filters.	Oakland, Calif.
Bucket elevators.	For hot lime system.	Stephens-Adamson Co.	Aurora, Ill.
Power.	From new Campbell River hydro-electric plant.	B. C. Power Commission.	Victoria, B. C.
Transformers.	Two 1500 KVA units.	Packard Div., Genl. Motors Corp.	Warren, O.
Transformers.	One 1500 KVA unit.	Westinghouse Electric Corp.	Vancouver, B. C., Pittsburgh, Pa.
High density stock conveyers and lime rock conveyers.		Dunlop Rubber Co.	Buffalo, N. Y.
Recovery furnace.	"I" type output 90,000 lbs. steam pressure per hr. at designed pressure of 600 lbs. p.s.i.	Combustion Engineering Co.	Montreal and New York.
Cascade evaporator.	Black liquor concentrated to 65% solids.	Combustion Engineering Co.	Montreal and New York.
Evaporators.	Quintuple effect 5-body vertical film type.	Goslin-Birmingham Corp. (License to Inglish, Ltd.)	New York and Birmingham, Ala.
Precipitator.	Cottrell type.	Western Precipitation Corp.	Los Angeles.
Drive for drying machine.		Harlan Engineering Co. of England.	England.



SUMNER HYDRAULIC SLAB BARKER



A TYPICAL SUMNER 54" SLAB CHIPPER



A DOUBLE REDUCTION HELICAL GEARED SPEED REDUCER

SUMNER

PULPMILL MACHINERY

SELECTED FOR

BLOEDEL STEWART & WELCH

NEW PULP MILL

AT

PORT ALBERNI

Below note some of the Sumner equipment installed:

WHOLE LOG CHIPPER

2 (6-Knife) CHIPPERS

SLAB CHIPPER
(as illustrated)

108" SWING CUT-OFF SAW

HYDRAULIC SLAB BARKER
(as illustrated)

5 LOG HAUL SECTIONS

ROLLS TO SLAB BARKER

SPEED REDUCERS
(as illustrated)

INQUIRIES ARE WELCOMED AND GIVEN PROMPT ATTENTION

STEAM CYLINDERS

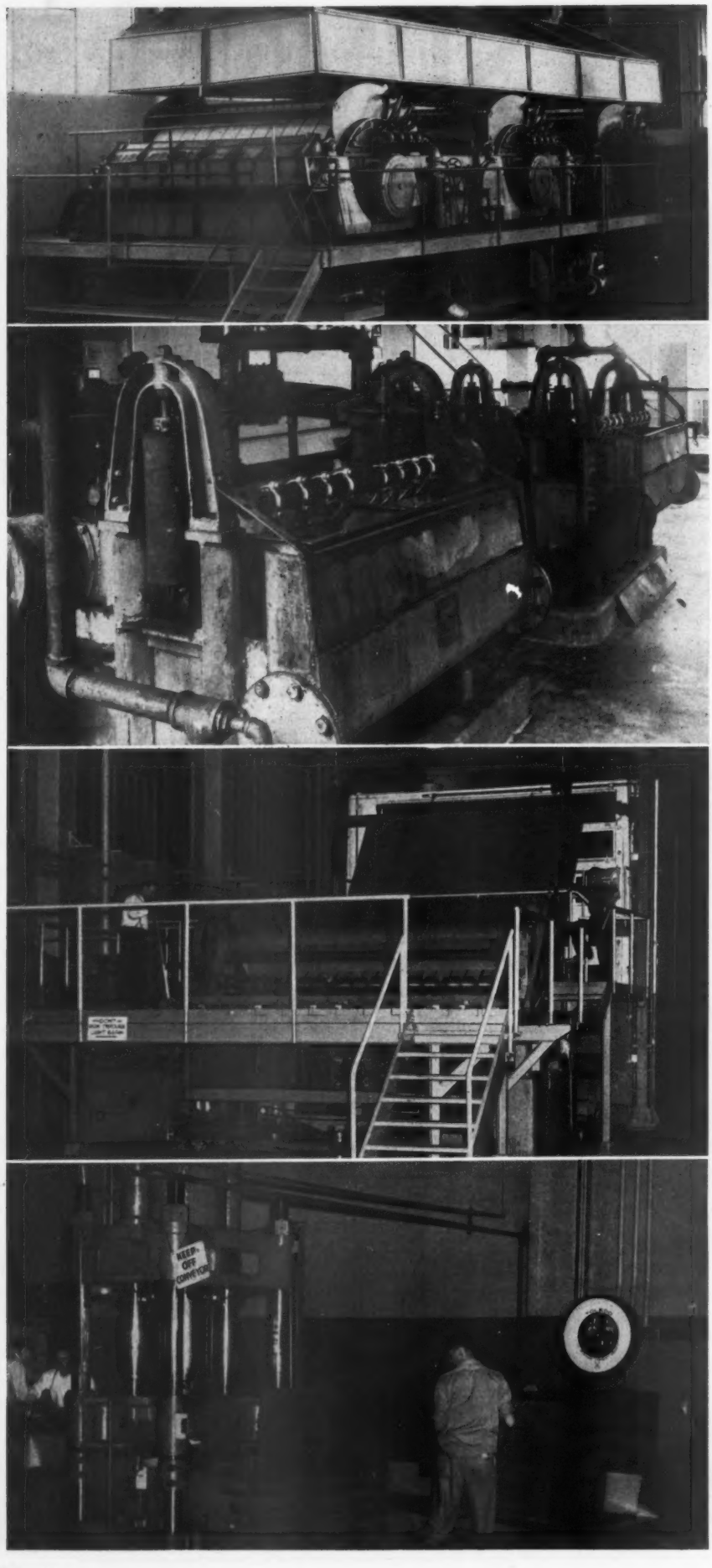
AIR CYLINDERS

SPROCKETS

VALVES

Canadian SUMNER IRON WORKS LIMITED
3550 EAST BROADWAY VANCOUVER, CANADA

IN U.S.A.—SUMNER IRON WORKS—EVERETT, WASH.



HERE IS SHOWN SOME OF EQUIPMENT selected for new modern pulp mill at Port Alberni.

Top View—Three units of Sherbrooke Machineries, Ltd., washers of Impco design.

Second View—Bird Jonsson knotters supplied by Canadian Ingersoll Rand Co.

Third View—Automatic layboy and cutter at dry end, supplied by Lamb Grays Harbor Co.

Lower View—Weighing and baling of pulp.

(Continued from page 42)

ings adjacent to the digester and screen room building. The evaporators are set adjacent to the recovery boiler in the same building with control instruments mounted on the operating floor of the recovery boiler and the precipitator is set so that access is easily obtained from the operating floor of the recovery boiler and so that both auxiliaries can be operated by the recovery boiler crew.

The recovery and evaporator buildings are on concrete foundations and of steel frame design sheathed with transite with the main operating floors of concrete and auxiliary service floors of steel grating.

Steam from the recovery boiler flows in to a main header serving all sections of the mill and is augmented by a 4000-foot high pressure line from the waste-burning boilers in the sawmill.

The recausticizing equipment is housed in a structural steel building sheathed with corrugated asbestos board; with liquor storage tanks immediately adjacent, in the open.

The discharge end of the lime kiln is located in one end of the building, so that reburned lime is stored and used adjacent to the lime slaker.

The lime mud filter is housed in a concrete building which also houses the feed end of the lime kiln where lime mud and lime rock are fed into the kiln for reburning. All equipment is laid out for straight line flow in a minimum area to the greatest extent possible.

Salt cake and sulfur are stored in two separate, reinforced concrete silos with hopper bottoms to feed into Redler conveyers. The sulfur or salt cake passes over a weightometer and to the conveyer to the recovery furnace salt cake mixing tank storage bin.

White liquor from the causticizing tanks is delivered to the white liquor clarifier and then to the white liquor storage which has a capacity sufficient for 20 hours' production. White liquor is pumped to the digester house to be mixed with black liquor in the proportions required for cooking each charge of chips.

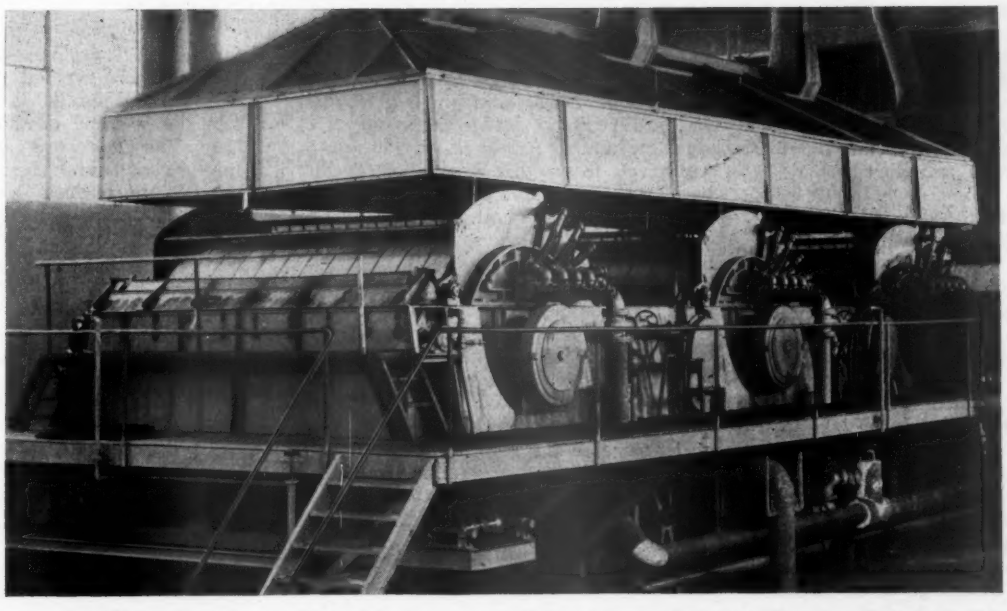
Location Engineering

Location and preparation of the site for the Port Alberni mill, which is really closer to the old town of Alberni than to the downtown section of the port, involved some difficult but exceedingly interesting engineering problems. The glacial formation of the country in the Alberni Canal near the mouth of the Somass River is such that the laying of foundations calls for careful planning and exhaustive tests, which were carried out well in advance of construction. Actually, the mill is located on a mound of hard pan which dips off into softer ground on either side of the site finally chosen. However, an ample

To

BLOEDEL, STEWART & WELCH
LIMITED

Felicitations



Sherbrooke Brown Stock *(black liquor removal)* Washers at Bloedel, Stewart & Welch, Ltd.

SHERBROOKE MACHINERIES
LIMITED
SHERBROOKE, P. Q.

SOME OF THE OPERATING PERSONNEL at the Port Alberni pulp mill: Front row, seated, left to right—Ray Lawrence, Paymaster's Office; A. Hedlund; L. G. Harris, Assistant Superintendent; James Petrie, Manager; Fred Millard, Tour Boss; Einar Walloe, Superintendent; J. Watts, Chief Steam Engineer until recently. Back row, standing—M. Freeman, Job Manager, B. C. Bridge & Dredging Co.; W. deM. Marler, Paymaster; Mickey McKay, Engineer; Val Gwyther, Resident Engineer; C. Hendricksen, Purchasing Department; Ray Rudjenskold, Building Superintendent, B. C. Bridge & Dredging Co.; Wallace Bennett, Office Manager; Ivan Sutherland, Tour Boss; Paul Fournier, Mechanical Superintendent, B. C. Bridge & Dredging Co.; Ivor Tucker, Electrical Superintendent; J. Askew, Chief Steam Engineer.

area is available for possible expansion.

Engineers also were confronted with a series of problems in erecting a wood stave aqueduct for the flow of water from Sproat Lake to the mill over a distance of about 5.8 miles. The aqueduct was designed to carry a maximum of 20,000,000 gallons every 24 hours. Starting with a diameter of 36 inches, the water line decreases in size to 34 inches and then to 30 inches.

The distance traversed by the pipeline includes a section of steel pipe approximately 600 feet in length crossing the Somass River in a trench at the bottom of the river. The diameter of the wood stave pipe varies from 36 inches at the lake intake to 30 inches at the end of the pipeline at the pulp mill. The diameter of the steel pipe at the river crossing is 24 inches. The maximum static head upon the 30-inch wood stave pipe at Port Alberni is 178 feet of 77 pounds per square inch pressure. With a discharge of 10 M.U.S. G.D. and friction loss of 25 feet, the net head is 153 feet corresponding to a pressure of approximately 67 pounds per square inch.

The water is pumped from Sproat Lake over a summit 74 feet in elevation above the low water surface of the lake and from this summit the water flows by gravity to the end of the line at Port Alberni.

The greater part of the pipeline traverses rough country and practically a continuous series of horizontal and vertical curves is necessary to obtain a satisfactory grade and alignment for the pipeline. The last one and one-third miles crosses tide flats and the 30-inch diameter pipe is supported on the pile or trestle bents above extreme high water mark.

The pipeline is divided into three sections by line gate valves as a measure of safety. An air valve is installed at every summit and a blow-off valve at depressions. Five hose connections are set at frequent intervals. The pipeline location was grubbed and graded for a width of eight feet and the right of way 50 feet in width was thoroughly cleared of all timber, brush, etc., that might create a fire hazard and all the tall trees that might create a menace to the safety of the pipeline were cut down.

The pump house at Sproat Lake contains three units each of a capacity of 4000 U. S. gallons per minute. The pump house was designed for an ultimate installation of four units with a total capacity of 20 M.U.S.G.D. Space was provided for an additional fifth unit to be used as a spare or to increase the capacity to 25 M.U.S. G.D. A power line to operate the pumps was constructed along the pipe line right of way. For crossing the Somass River, submarine cable was used.

The original idea was to lay the pipe section by section across the Somass River, with the necessary connections being made by submarine diver, but this work could be done only when the tides were favorable. Therefore, the 24" steel pipe sections were welded on land. Trestles were erected parallel to the river to facilitate the welding of the continuous sections. The ends were capped to make the line buoyant and the pipe was floated clear of the trestles on a pre-determined high tide and towed into a marked position over the trench dredged in the river bottom.

When positioned, the pipe was partially filled with pumped water from the attending scow to overcome its buoyancy and finally filled in two and a half hours through a 3" valve and successfully sunk into its final position, with its capped ends resting on either bank. Construction of the pipeline wood staves required about 700,000 feet of clear kiln dried fir, and this was manufactured by the Bloedel sawmill at Port Alberni.

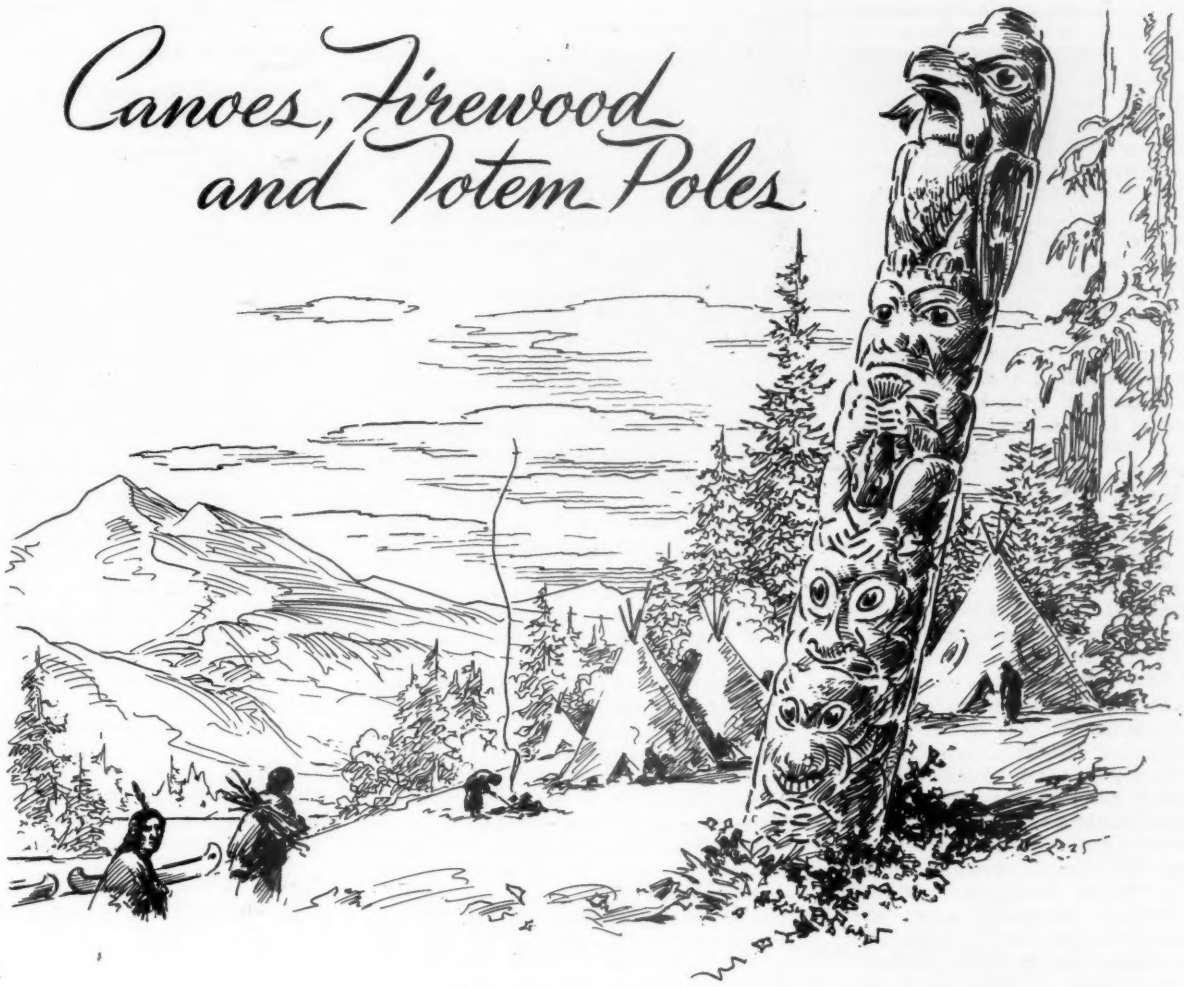
Top Personnel

The principal executives in the Port Alberni operations are as follows:

As previously stated, Prentice Bloedel is president. S. G. Smith is vice president

LEFT TO RIGHT: HOWARD A. SIMONS, Designer of the new Bloedel, Stewart & Welch pulp mill (he is son of late prominent pulp and paper mill engineer who formerly made headquarters in Chicago), JAMES PETRIE, Resident Manager of the new mill; EINAR WALLOE, Supt., and VAL GWYTHER, Resident Engineer.

Canoes, Firewood and Totem Poles



EVER since the dawn of settlement on the Pacific Coast, Vancouver Island has been famous for its forests.

The trees used by the Indians in the early days for their canoes, firewood and totem poles are today the life-blood of British Columbia's greatest industry.

And, thanks to long-term forestry policies, timber will continue indefinitely to serve the country's economy by supplying the need for forest products and building payrolls.

Bloedel, Stewart & Welch, Limited, is proud of the part it has played in making the rich natural resources of Vancouver Island continuously productive.

UNBLEACHED SULPHATE PULP MILL, PORT ALBERNI (Vancouver Island)

BLOEDEL STEWART & WELCH, LIMITED

VANCOUVER, CANADA

and general manager, in charge of the company's timber division. Bruce M. Farris heads up the sawmilling division as vice president. Robert Laird is general sales manager for the whole organization and C. Y. Robson is resident manager of operations at Port Alberni, with Charles Plant, manager of the company's shingle manufacturing and Pres-to-Log departments.

Operating pulp mill personnel at Port Alberni is headed by James Petrie, manager of the new pulp division. Mr. Petrie spent many years in Ocean Falls, B. C., with Pacific Mills, and was largely responsible for the control system installed there. He was assistant manager at Ocean Falls when he joined the Bloedel organization.

Superintendent is another former Ocean Falls man—Einar Walloe, with wide experience in the kraft pulp industry. Before going to Port Alberni he was with Marathon Paper Mills of Canada as superintendent.

L. G. Harris, who was previously with Brompton Pulp & Paper Co. at Red Rock, Ont., and Sorg Pulp Co. at Port Mellon, B. C., as well as with Pacific Mills, is assistant superintendent.

The three shift foremen, all of considerable experience in the production of west coast kraft, are Andy Hedlund, Fred Millard and Ivan Sutherland.

Joe Askew is chief steam engineer and master mechanic. He was formerly with Pacific Mills, but more recently at Michel, B. C., as chief engineer of a coal company. Val Gwyther has been resident engineer during construction at Port Alberni, with Allan Stewart, assistant engineer.

Assisting Mr. Simons, designer of the mill, at his office in Vancouver, have been George Fletcher, purchasing agent, and Ken Hunter, his aide, with C. Hendrickson representing the purchasing department at Port Alberni. Frank Alexander is electrical engineer at the Vancouver office. Arthur Pearson has been structural engineer.

Main contractor for construction was British Columbia Bridge & Dredging Co., Vancouver, B. C. Construction of the recovery and causticizing plants is of steel and Transite; chip storage, digesters, machine room and screen rooms are of concrete, and warehouse, office and machine shop are of wood. Representing B. C. Bridge & Dredging Co. was Ivor Anderson, general superintendent, with N. Roach project engineer.

Historical Background

From an historical standpoint it is interesting to recall that the Alberni district was the site of British Columbia's first pulp mill, which was operated briefly during the 1890's. Strangely enough, the backers of this pioneer mill did not recognize the possibilities of the country's greatest natural resource—wood—and attempted to make a commercial product through the processing of ferns, waste paper and burlap, using grinding wheels imported all the way from England.

Port Alberni today is one of British Columbia's busiest centers, depending chiefly on the forest industries, although it is also an important base for west coast fisheries operations. Construction has been active in the community during the past year, much of it stimulated by the advent of the pulp mill.

Bloedel, Stewart & Welch, Ltd.'s first activity in British Columbia followed acquisition of timber at Myrtle Point 36 years ago, and until a shingle mill on Boundary Road between Vancouver and New Westminster was taken over the main concern of the company was in logging. However, in 1926, Bloedel, Stewart & Welch entered Vancouver Island by forming a partnership with King-Farris Lumber Co. to operate Great Central Sawmills, which cut lumber from timber in the Esquimalt & Nanaimo Railway (C.P.R.) belt at Great Central Lake.

Bruce Farris, who had been previously associated with Mr. Bloedel in sawmilling at Bellingham, Wash., was one of the partners in the King, Farris group. He bought the King interest and his holdings at Great Central, B. C., were subsequently taken over by the Bloedel organization which Mr. Farris joined in 1932. He became vice president in charge of sawmill operations, and was a resident until recently at Port Alberni, where the company established a large tidewater sawmill in 1935 to process logs from extensive timber limits acquired in 1927 in the Alberni Canal area.

Back in 1930 the Myrtle Point operation was discontinued and the company began to concentrate on Vancouver Island, where in 1926 additional timber holdings had been purchased, at Menzies Bay. The company still logs there, although its processing plants have been located at Port Alberni, Great Central and on Boundary Road, Vancouver.

Pulp Machines and New Bag Plant for Port Townsend

Three machines to process wood pulp for "wet shipment" are being moved from Crown Zellerbach's mill in West Linn, Ore., to the Crown Zellerbach mill in Port Townsend, Wash., Resident Manager Leo Ziel has announced. A new bag factory also is planned at Port Townsend.

The three wet machines will be installed in a 40 by 100-foot Quonset hut erected outside the main building at the mill and operations were to start Feb. 1. Cost of the installation, exclusive of equipment, will amount to about $60,000, the manager said.

The new operation will add 18 or 20 men to the Port Townsend payroll.

Mr. Ziel explained that the wet machine installations will enable the mill to process an additional 25 tons of pulp daily and it will be shipped elsewhere in baled form for further processing into paper.

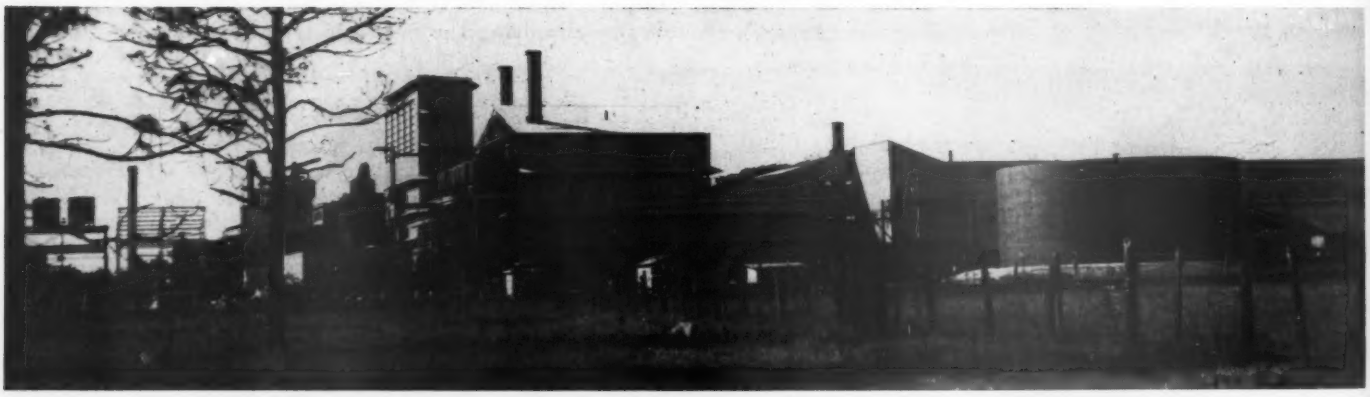
The Port Townsend mill has not made a practice, up to this time, of manufacturing pulp for wet shipment, but has used all its pulp.

Mr. Ziel also announced that two new digesters had been ordered to replace equipment now in use and that the mill's other improvement projects, including a new hydraulic barking and processing plant, are progressing satisfactorily.

Harry Weston Joins Superintendent's Association

Harry E. Weston, who has been editor, sales engineer and teacher in the pulp and paper field for the past 28 years since graduation from the N. Y. State College of Forestry in Syracuse, has joined the Superintendents Association as associate secretary-treasurer, it is announced by Ray Bennett of Ecusta Paper Corp., president of the association.

Mr. Weston, who has been in the publishing field in Chicago for many years, will continue to live there and will have offices at 38 So. Dearborn St., Chicago,



ALTHOUGH MACHINERY DELIVERIES WERE SOMEWHAT DELAYED, the new pulp and paper mill of Alabama Pulp & Paper Co. (St. Regis) at Cantonment, Fla., across the road from the affiliated Florida Pulp & Paper Co., looked very close to the "ready" stage when these views were taken at Christmas time. Depending upon delivery schedules, the mill was expected to produce in early February.

We offer sincere congratulations to

BLOEDEL, STEWART & WELCH, LTD.

Port Alberni, B. C.

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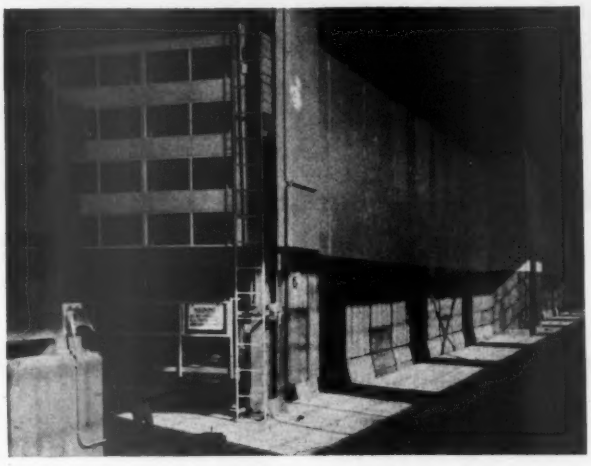
We are proud of the installation of our equip.-ment in your mills. Your selection of our equipment constitutes an endorsement of outstanding significance.



S. F. Flakt Dryer for Best Dried Pulp as Supplied by Paper Machinery, Ltd.

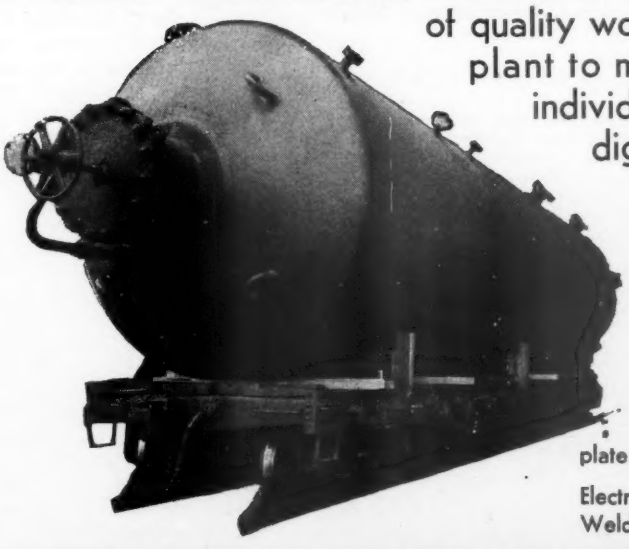
PAPER MILL MACHINERY LTD.

921 Sun Life Building, Montreal, P. Q.

Principal Representatives on the American Continent for:

S. F. FLAKT DRYERS, PML-KAMYR MACHINES, KAMYR BLEACHING, ETC.

PULP DIGESTERS of the latest design and of quality workmanship are built in our plant to meet the requirements of individual clients. One of three digesters ordered by Bloedel, Stewart & Welch Ltd., for installation at Port Alberni, B. C., is shown in the accompanying illustration.



SPECIFICATIONS

Diameter 15 feet; Length 51 feet. 1⅝" plate throughout except heads which are 1¾".

Electrically welded by Union Melt Automatic Welding process, stress relieved and X-rayed.

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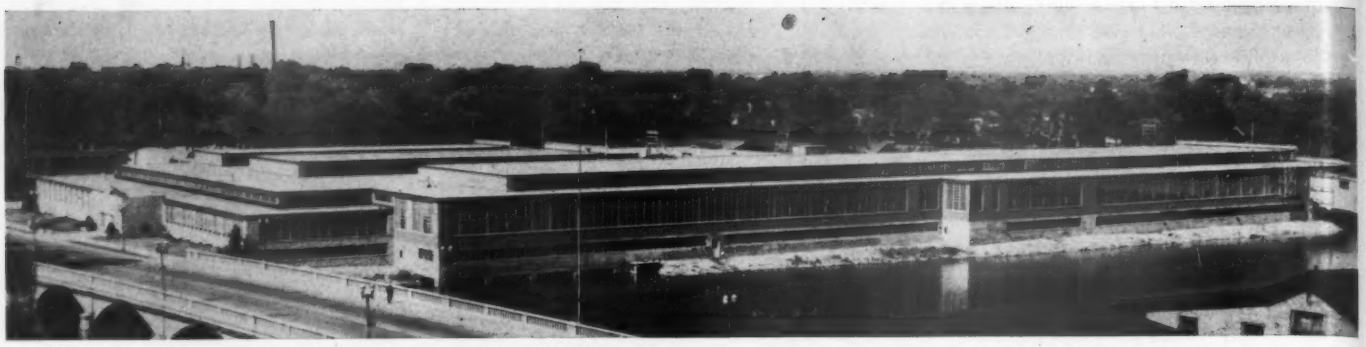


HERE'S VIEW OF MARATHON CORP.'S NEW 300x800 FOOT MODERN CARTON PLANT, one of the new showplaces on the Fox River at Menasha, Wis., visited a few weeks ago by PULP & PAPER.

Neenah-Menasha Has New Plant Landmark

A new showplace on the Fox River of Wisconsin—one of the greatest arteries of the pulp and paper industry in the world—is the modern carton plant of Marathon Corp. at Menasha, shown in above photograph. It is the result of the increased business Marathon is doing in supplying packages and packaging materials for the American food industries.

The new plant was necessary to handle increased manufacturing and provide for future growth, according to Leo E. Croy, executive vice president of Marathon, and R. J. Sund, manufacturing vice president, both of whom make their headquarters in Menasha, Wis. D. Clark Everest, president, remains at the parent mill in Rothschild, Wis.

The new carton plant is a prominent structure on the principal street of Menasha, sister paper town of Neenah. Its bright-looking, numerous big windows and attractive brick structure have become a new landmark. Carton converting was moved from the north side of the Fox River to the south side.

The space vacated is available for expansion of coating and laminating activities.

Marathon has a modern pulp mill in Ontario besides paper mills at Rothschild, Menasha and Ashland, Wis., and Menominee, Mich., and two paperboard converting plants at Wausau, Wis.

At Menasha, Marathon now has five plants—the new carton plant; an expanding Parafilm plant; a wax paper plant; a wax refinery, and the two-machine paper mill. These are 62 and 72-inch Fourdriniers. Win B. Graebner is the resident manager at Menasha.

About 30 machines are employed in the new carton plant, including a few new ones. They include letter presses, Miehle cutting and creasing presses; wax dipping machines, glueing machines, etc. Efficient handling of materials and flow of operations characterizes the new addition.

HERE'S THE FIELD ORGANIZATION OF THE LOCKPORT FELT CO., who recently met in Newfane, N. Y., where service to paper mills was the dominant theme of their gathering.

BACK ROW (left to right): GEORGE W. HARDAKER of 51 Longwood Ave., Holyoke, Mass., who travels in the South; EDWARD JOHNSTONE, Sales Engineer out of Newfane; ALAN DUNHAM, Equitable Bldg., Portland, Ore., representative on the Pacific Coast; LESTER CARNER, Secretary of the company, and THOMAS M. GILLESPIE, Rte. 2, Box 41, Lake Villa, Ill., who represents Lockport in the Middle West from Colorado to the Alleghenies.

FRONT ROW (left to right): FRED DRAKE, 22 East 36th, New York, veteran representative in the South; AL JULIN, Box 185, Watertown, N. Y., who tours the mills of New York and New England; WILLIAM CAMPBELL, 252 High St.,. Lockport, N. Y., representative in the Middle Atlantic States, and BERTRAM AUDLEY, Assistant to President WILLIAM H. LEE, in Newfane.

Wisconsin Tissue; Bergstrom Have Building Programs

Industrial expansion in the Neenah-Menasha twin cities of Wisconsin is continuing in 1948. With Marathon's big carton plant on Washington st., Menasha, now operating, the new year program includes expansion for Wisconsin Tissue Mills and Bergstrom Paper Co.

Construction of warehouses is proceeding for the Wisconsin Tissue Mills, which will have a $31,000 building in Menasha.

Bergstrom Paper Co is building a $25,000 structure in Neenah for another paper machine.

When the Co.'s second new papermaking machine is installed, Bergstrom Paper co.'s output will be 105 tons per day, almost 10 times as much as when Dederick Waldemar Bergstrom pioneered the company in 1904 after he formed a corporation to purchase the former Winebago Paper Co.

It is 96 years since D. W. Bergstrom came to Neenah with his parents and a younger brother, George. When he completed his schooling at 14, he worked in a general store; later he worked for a pail factory for 30 cents a day.

In 1878, he and his brother bought a stove company. However, he had a dream about paper and sold out to his brother and formed a corporation with his wife and his son to buy the Winnebago Paper Co. at the end of W. Wisconsin avenue. Bergstrom Paper Co. then came into existence and the output was 5,000 tons a year. Today the output is more than that in a single week.

The present Bergstrom plant a few months ago began construction of a warehouse to the north of its present mill as well as a warehouse project on the Dixie road. Two Bergstrom sons, John and Nathan, as well as a grandson, D. W. Bergstrom III, are carrying on the traditions of the senior Bergstrom. John is president and Nathan is vice-president.

THE AMERICAN

DIESELECTRIC

A REVOLUTIONARY NEW LOCOMOTIVE CRANE

Seven tons of wearing parts eliminated!

Pays for itself in FIVE YEARS... as proved by long-term cost records.

40-TON POWER makes light work of big loads

DIESEL power to the deck;

ELECTRIC power to the trucks

CLEAR-VIEW CAB lets operator see load at all times

DIESEL-ELECTRIC LOCOMOTIVE CRANE. PATENT NO. 2003460. TOUCH CONTROL. PATENT NO. 2370856.

Plant No. 2: So. Kearny, N. J.

Sales Offices: NEW YORK • PITTSBURGH • CHICAGO NEW ORLEANS • SAN FRANCISCO

8622

MAIL THIS COUPON TO

American Hoist and DERRICK COMPANY
Saint Paul 1, Minnesota

for Catalog 600-L-4, with full details about the DIESELECTRIC. See how this all-new crane design eliminates seven tons of wearing parts ... slashes upkeep expense 25% to 50% ... makes rail travel faster, smoother ... brings pulpwood handling costs to sensational *new lows!*

*Name*_____

*Company*_____

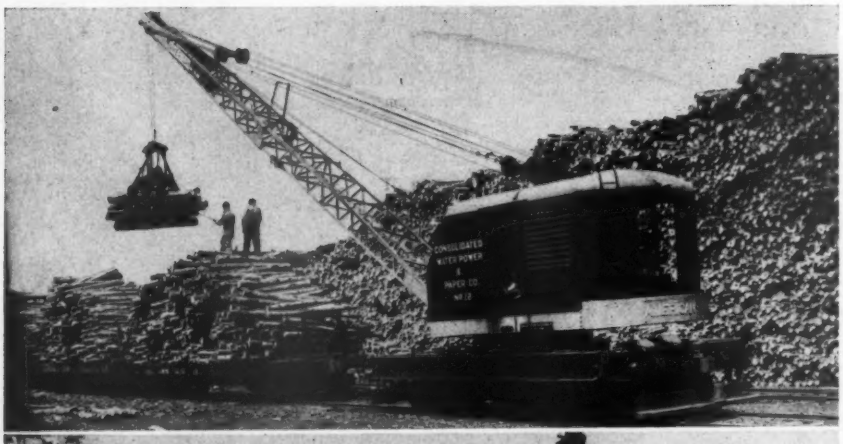
*Address*_____

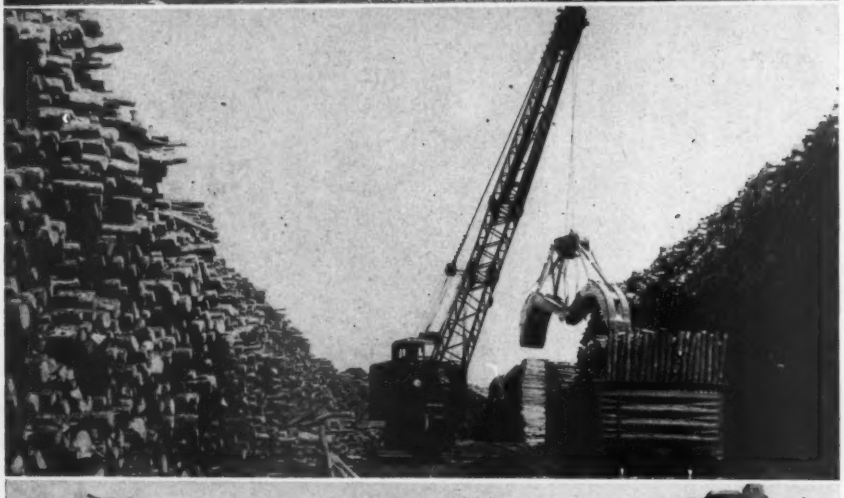
*City*_____ *State*_____

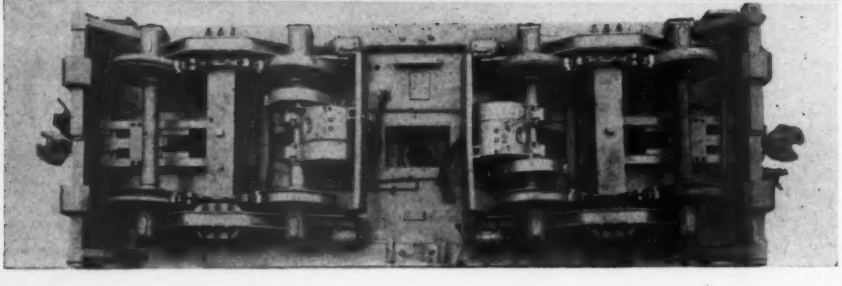
"The most effective way to encourage the growing of trees is to develop profitable reasons for cutting them down." — (A. G. T. Moore, Southern Pine Assn. executive, in 1938).

LOADING AND UNLOADING CARS

Problems Vary in North, South and Far West







Efficient methods of loading and unloading pulpwood on and off railroad cars has become a subject of prime importance in this industry, not only in the South but in the Far West and in eastern areas of the United States and Canada.

From the point of view of costs and speed of handling, it is a problem which may even make or break the harvesting of small wood in some areas of the Far West, where water transport is not available. Because this small wood — hitherto impractical to bring in to mills with equipment used for heavy logging—has become the determining factor in the perpetuity of the Pacific Coast industry, it is a pretty safe bet that someone is going to figure out a solution. Pacific Coast operators can't afford to fail.

Likewise, increased mechanization in handling of small wood from Canada to the deep South is progressing so rapidly that operators in those regions are taking another look at railroad car handling to see how it can be improved from the points of view of cost — speed — safety.

In the South, especially, this has long been a subject which could be depended upon to stir up a discussion wherever mill executives met. It was because of the interest evidenced in such a discussion at a meeting of Southern superintendents held in Bogalusa, La., that **PULP & PAPER** set forth to get some information on the subject. It has been many months since that Bogalusa "debate" on the subject. But in that time we have turned up some comments of interest.

Meetings between mill and railroad officials to study ways and means of improving car facilities and car handling

PICTURES SHOW THE NEW American Hoist & Derrick Co.'s diesel electric locomotive cranes handling wood on two different types of railroad cars in the yards of pulp and paper mills of the Middle West. A discussion of loading and unloading methods used with this crane is presented in this article. The lower picture is a "worm's eye view" of the travel mechanism. The principle advantage of the crane of this type is that it has electric travel. The machinery on the rotating deck is mechanically operated through air-controlled clutches, but for shifting cars, the crane is in effect a diesel electric locomotive.

CENTENNIAL SPOTLIGHT
1848-1948

In this 100th anniversary year as Machine Builders for the Paper Industry, Puseyjones points with pride to outstanding post-war installations. In the spotlight . . . 245" Fourdrinier Machine built for: The Champion Paper and Fibre Company, Canton, N. C.

PAPER · · · America's 6th Industry

SUDS FROM PAPER TISSUES

(NEWS ITEM: *Paper tissues impregnated with soap are a recent development for today's travellers.*)

Workers and travellers have found a new, easy way to carry soap with them. Paper tissues, in convenient purse-size booklets, are impregnated with soap. The user wets hands, wets one soap tissue thoroughly, and uses as an ordinary cake of soap. The used tissue is easily disposed of in a waste receptacle. Remaining soap sheets can be returned immediately to suitcase or purse with no danger of damaged fabrics. We will supply manufacturer's name on request.

Paper to polish silver . . . paper bags to package ice . . . paper cords for washday . . . new uses for paper calling for new standards of lightness and toughness, new standards of quality in performance. New responsibilities —new opportunities for the Pulp and Paper Industry.

The Puseyjones Organization is now devoting itself completely to the design and construction of Paper-Making Machinery built to new high standards of speed and efficiency, and to the modernization of existing machines. Additional capacity in Metals Fabrication is now available through conversion of facilities formerly devoted to the building of ships.

Puseyjones Engineers will welcome the opportunity to work with you in solving production problems.

THE PUSEY AND JONES CORPORATION
Established 1848. Builders of Paper-Making Machinery
Wilmington 99, Delaware, U. S. A.

THE SIGN OF TRADE MARK SUPERIOR QUALITY

were advocated by one Southern mill superintendent. Another offered this idea—

Certain cities in the South, particularly, prohibit passage of open pulpwood cars. Where it is necessary to use closed cars, the mills have found it expensive and slow to unload from the orthodox center doors. Why not have openings at each end of the car, as well, to make it unnecessary to carry all wood in and out of the center of the car?

A new cable and button conveyor for automatic, push-botton controlled loading and unloading on cars has aroused considerable interest among Southern industry officials, as indicated by their comments on the subject. But this still requires considerable labor.

W. T. Burns, general freight traffic manager of the Union Pacific Railroad Co., 1416 Dodge St., Omaha 2, Nebraska, told **PULP & PAPER** that it has been his company's practice when using open top cars for the handling of slabs or small wood, to provide racks in order to insure the best possible handling. He said he knows of nowhere on the Union Pacific lines, which are in the Far West principally, where cities or towns prohibit open railroad cars carrying pulpwood.

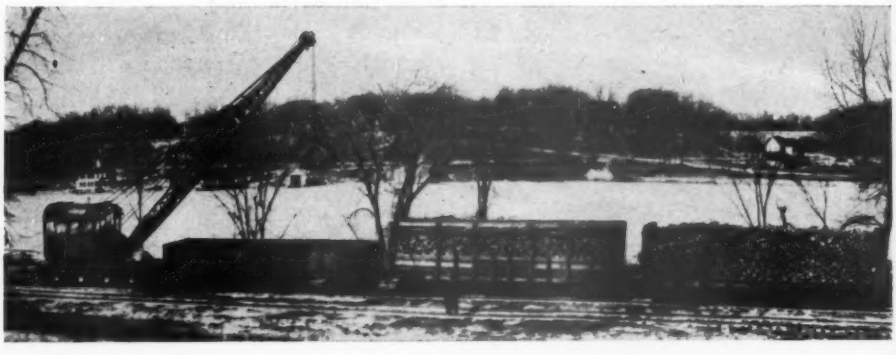
He said Union Pacific has always given a great deal of attention to the matter of equipment to meet the needs of the pulpwood and pulp and paper industries and any ideas that will provide a tighter, and therefore, a safer load on the cars, while at the same time saving space and doing an economical job for the patrons, are welcomed by his company.

In the East, Southeast and Middle West, a major portion of the pulpwood used by the various mills has been handled by locomotive cranes. At these mills, it was seldom possible to plan on a steady flow of pulp logs and, as a result, it was necessary and still is necessary to store a great deal of this material. The material is received at the mills on flat cars, in gondolas or in special pulpwood cars, and unloaded with a locomotive crane and a grapple. In a few instances, crawler cranes are used, and there are also a few derricks in such installations, but the locomotive crane is generally preferred because it can switch the cars as well as unload them. When the wood is coming in, a sufficient number of cars can be unloaded directly into the hot pond to keep the mill going, and the balance is stocked in the woodyard. During the times when there is no pulp wood coming in, wood must be taken out of storage, loaded on flat cars and again unloaded at the log pond.

In the South the trend in the past has been to hand labor. But trend of increased wages throughout the country has hit the South. As a result, the mills in that portion of the country are finding their pulpwood handling costs sky rocketing, and they are now considering mechanical means of handling material.

As we reported in our December issue, new American Hoist & Derrick Co. (St. Paul) diesel electric cranes with handling capacity up to 80 cords per hour are being

A BLAW KNOX pulpwood grapple of 1½ cord capacity is being used here at Kimberly-Clark Corp., Niagara, Wis., mill on eight-foot wood.



BROWNING Model M1 diesel locomotive crane ¾ cord Browning side open-grapple at Appleton, Wis., mill of Consolidated Water Power and Paper Co. Shown switching 50-ton cars to winter stock pile from railroad siding ½ mile crane unloads cars from track on near side. Sixty 4 to 6-inch sticks with gram, with two men only needed for deck crew. Several trains up to 11 cars are unloaded each day.

put to efficient use in Wisconsin, Minnesota, Canadian and Southern mills.

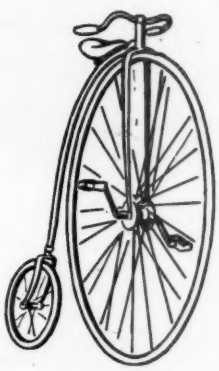
Locomotive cranes are being installed in some of the Southern mills because the cost of mechanical handling is coming closer to that of hand labor. With old-style steam cranes which required a fireman as well as an operator and where the fuel cost was $7.00 or $8.00 per eight-hour shift, the cost of handling per cord was quite high. With the innovation of diesel and diesel electric locomotive cranes which are one-man operated and which require about one dollar's worth of fuel per eight-hour shift, the cost of operation per cord was greatly reduced. The efficiency of these modern cranes further reduced the handling cost, and the rapidly increasing labor rates even in the cheap labor areas has, in most cases, made the mechanical handling of pulp wood far cheaper.

A further trend in this industry is the installation of larger locomotive cranes than have previously been used. A few years ago, the paper mills used 25 and 30-ton capacity locomotive cranes with a grapple having a nominal capacity of three quarter cords of wood. The present standard in the larger pulp yards is a 40-ton crane, and grapple sizes have increased to 1¼ and 1½-yard capacity.

Practice In Wisconsin

There is very little 4-foot wood used in Northern Wisconsin, practically all of it being 8-foot in length, and the method of piling in the cars varies, but all of it is piled across the cars so that the grapple can get in and pick it up.

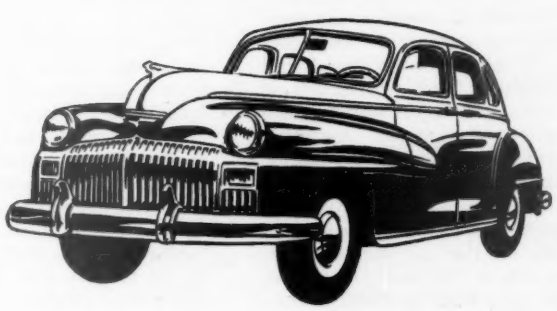
Visiting Wisconsin mills, it is observed that where a low side gondalo car is used, stakes are placed upright along the side of the cars and chicken wire run around these stakes so that the pulpwood cannot shift in transportation. This allows them



Both will GET YOU THERE

WHICH IS YOUR CHOICE for *FAST, EFFICIENT, ECONOMICAL TRAVEL?*

The velocipede served its purpose well in bygone days, but businessmen today prefer the automobile. When selecting a supply source for their pulp requirements and a distributor of their product, mill executives show marked preference for Bulkley, Dunton's up-to-date distribution methods. Unexcelled service facilities, worldwide connections, and the long-accumulated experience of Bulkley, Dunton are some of the many factors which influence the buyers, sellers and exporters of pulp and paper to entrust their problems to this alert and progressive organization.



BULKLEY-DUNTON ORGANIZATION

295 MADISON AVENUE, NEW YORK 17, N. Y.

In New England— **CARTER, RICE & CO. CORPORATION**

Offices and representatives in 59 cities in the United States, Latin America, Europe and the Far East.

to go up about again as high as a gondola car. Where a high side gondola is used, they load to the top and do not stake or wire.

In some cases wood is shipped on flat cars and it depends on the length of the haul as to whether or not stakes and wire are used.

The logs that come in are on flat cars loaded lengthwise of the car with stakes to hold them in place. This enables a grapple to go in between the stakes to pick up the logs. These logs usually run from 16 feet to 20 feet in length and in diameter approximately 12 to 18 inches. However, the use of logs is somewhat limited and the main consideration in handling wood is in the 8-foot size.

Sometime ago one of the paper companies made a test of a ¾-cord Blaw-Knox grapple and found that the average pick up was 26 sticks and these were 7.08 inches in diameter. In handling 8-foot wood from cars to piles, the general average would be about three cars, or 60 cords an hour, but sometimes is as high as 90 cords, depending on the way the cars are spotted and the reach necessary to load the wood on piles.

The practice in the Wisconsin mills observed by **PULP & PAPER** is to pile wood three tiers deep from the tracks, and not over about 20 feet high. They cannot go higher than this because of the danger of the piles toppling over due to the freezing and thawing.

When the wood is loaded on to flat cars for transportation into the mills themselves, it is a much faster operation and 75 cords an hour could be considered as a reasonable figure.

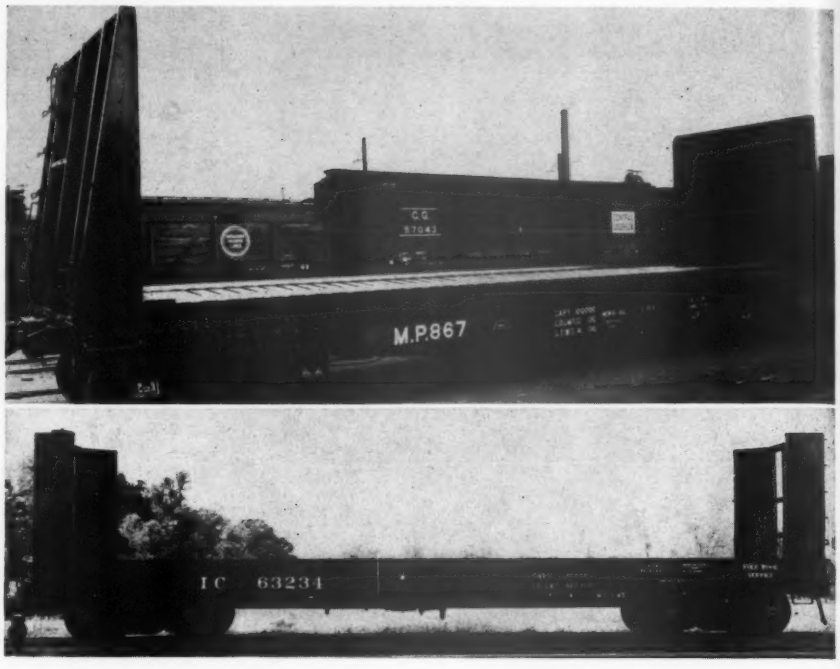
It is quite common with Middle Western mills to carry 75,000 to 100,000 cords of wood in their storage yard and the transfer of wood from storage yard to the mills is a 24-hour operation. A wide use is made of Blaw-Knox grapples, the popular size being one cord in 8-foot wood. Some mills still use old steam cranes but others are replacing them with diesel or diesel electrics, and have found them more satisfactory from an operating standpoint and more of a safety factor from the standpoint of fires in the wood yard.

C. F. Duggan, vice president in charge of operations of the Illinois Central, whose offices are at 135 East 11th Place, Chicago 5, Ill., told **PULP & PAPER** "considerable savings" have been effected in pulpwood loading and unloading costs by the use of a rack type car designed for exclusive handling of pulpwood on the Illinois Central lines. This company serves several South Central states, where pulpwood transport is an important part of its freight business.

Mr. Duggan said he thought it would serve a good purpose to call attention in this story to the fact that occasionally there has been unavoidable delay in movement of pulpwood owing to improper loading by shippers. Pulpwood projecting beyond the sides of cars necessitated such cars being held up for adjustment so they could pass published clearances.

Further savings are possible to the pulpwood companies by use of efficient mechanical loaders, said Mr. Duggan. He mentioned Browning Crane Shovel Co. (Cleveland) locomotive cranes and wood grapples, whose catalogues show photoqraphs of its equipment in use at Minnesota and Wisconsin mills. With this crane, wood can be piled in 35-foot high piles, 3 tiers deep.

TWO TYPES OF SPECIAL PULPWOOD cars—the top one is Missouri Pacific lines' offering and the lower one is the Illinois Central's. These cars are discussed in article.



Practice on Pacific Coast

In the feature article in our October 1946 issue, on the new wood preparation plants of Soundview Pulp Co., Everett, Wash., photographs and descriptive material were published concerning the new system this company had devised for unloading railroad cars of small wood at the mill. This wood is not going to be piled on the ground, necessitating further handling before it reaches the small wood hydraulic barking machines newly installed at this plant. Instead a big hammerhead crane with a large-size Blaw-Knox grapple lifts a dozen or more of the 8-foot lengths of 8 to 18-inch diameter wood from the railroad cars in one motion directly to the operating (second) floor of the plant housing the small hydraulic barkers. There is storage space for wood on the transfers. On the spur there is storage room for two or three cars.

Crown Zellerbach Corp. has been bundling small wood in Acme Steel Co. steel bands and dropping the bundles in waterways for towing to its paper mills. However, where railroad cars instead of waterways are the mode of transport, cord bundles may be wrapped in steel bands and lifted into cars. Up to 20 cords could be loaded in cars. Where logging is on fairly level ground and there is plenty of room for storage of these bundles, this method may be practical.

A Criticism of Coast Operators

One representative of a crane company said the Far West could advantageously study Midwest methods now that handling of smaller wood has become a new problem in the Far West. He said:

"I have been in close contact with the Wisconsin and Minnesota pulpwood handling for a good many years. Last fall, I made a survey trip in Washington and Oregon to look over the situation out there. As you know, the Western mills have, in the past, been operating almost entirely on large logs which were delivered by water. What is more important, they have had a steady flow of this material the year around so that it has not been necessary for them to stock pile logs except in isolated instances. But now it is necessary for the Northwest mills to operate on small timber.

"They have all sorts of ideas, many of them entirely impractical, and most of them are still putting this problem to one side as something which will be tackled in the dim, distant future," he said.

"Where logs can still be delivered by water, the banding system will undoubtedly be practical," he continued. "This will require a heavy derrick at the mill to lift these bundles out of the water for breaking up and cutting to proper length. In cases where the bundles must be hauled by car or truck to the water, a careful survey should be made to see whether it would not be cheaper to handle this by cars or trucks directly to the mill to avoid the double handling. Where the material is to be shipped to the mill on cars, a careful survey should be made to see whether it would not be cheaper to ship logs cut to the proper length on cars directly to the mill, and handle them there with a crane and pulpwood grapple."

Interesting facts about PAPER

According to the Chinese encyclopedia, silk waste was used in paper making until 105 A.D. when T'sai Lun, famous Chinese statesman, invented a paper made from bark, hemp, rags and old fish nets.

INTERESTING FACTS ABOUT BISMARCK BROWN RX CONC. DUSTLESS

Tinctorially one of the strongest of basic colors, BISMARCK BROWN RX CONC. DUSTLESS is used extensively to produce browns, tans, and as a dulling agent for the brighter Acid, Basic and Direct colors in both sized and unsized papers. Although it does not dye bleached fibers well, its excellent solubility makes it well suited for both beater and calender coloring.

BISMARCK BROWN RX CONC. DUSTLESS is widely used in such paper applications as kraft, poster, tissue, wrapping and boxboard.

Calco

CALCO CHEMICAL DIVISION
Heller & Merz Department

AMERICAN CYANAMID COMPANY
Bound Brook, New Jersey

New York • Chicago • Boston • Philadelphia • Charlotte • Providence

IN THE INDUSTRY NEWS (left to right(:

WALTER L. HENDRIX, formerly Plant Engineer at Herty Foundation Laboratory, 510 West River St., Savannah, Ga., has been carrying on as the Director of the laboratory since death last year of Bruce Suttle. Many tests are being made here in use of hardwoods and bagasse for paper, with one big container company among the firms financing these experiments.

JOSEPH J. HITE, who has been promoted to Assistant Chief Engineer of American Hoist & Derrick Co., St. Paul, Minn., serving under Chief Engineer R. J. Stoddard. Mr. Hite, Iowa State graduate, specializes in locomotive crane and crawler designs.

EDGAR PORTER, new Manager of Quebec Forest Industries Association, Quebec City, Que., succeeding W. A. E. Pepler, now Woodlands Section Mgr. for the Canadian Pulp & Paper Assn. Mr. Porter was born in Three Rivers, Que., and was Chief Forester for Anglo-Canadian Pulp & Paper Mills.

JUAN P. BOSCH, who headed Van Reekum Paper, Inc., in Buenos Aires, has returned to Bulkley, Dunton Paper Co., S. A., in New York, as Manager of Sales in several Latin American countries. He formerly was with B-D for six years.

VISITS SIXTY FIVE MILLS ON

A Tour Around the World

Sir Herbert Gepp, managing director of Australian Paper Manufacturers, Ltd., Melbourne, operators of four paper and board mills, the largest organization of its kind in Australia, has visited 65 pulp and paper mills during a year trip around the world, accompanied by J. Wrixon Thorpe, technical assistant of the company.

They started out in February, 1947, and were sailing home from San Francisco on Feb. 11 of this year, after zigzagging across the U. S. and Canada, following visiting mills in Southern Asia and Europe, including Scandinavia. Their principal purpose was to observe processes in kraft mills and board mills.

Sir Herbert, addressing groups from three mills in Everett, Wash., said two subjects of prime interest to them, were:

1. Hydraulic log barking.
2. Kraft recovery of chemicals.

Australian Paper Manufacturers, Ltd., now producing about 125,000 tons of wrapping paper and board annually, plans to increase production to approximately 200,000 tons during the next three years and to that end has placed orders with the Walmsley organization in England for an MF kraft machine and an MG board machine for the manufacture of high grade boards.

Discussing his tour with **PULP & PAPER**, Sir Herbert said that the Scandinavian countries were still experiencing difficulties due to the shortage of coal, which was being replaced to some extent by oil, with large quantities of pulpwood still being used as household fuel.

"The thing that impressed me most in Sweden, Norway and Finland was the continued emphasis on research," said Sir Herbert. In Oslo, Stockholm, Helsinki and other centers the mills maintain magnificent laboratories. The research men are not afraid to discard ideas if they are proved wrong.

"Realization of the value of the forest industry in all Scandinavian countries is obviously growing, and they are now tackling the use of hardwood, especially birch. We in Australia have had to experiment a great deal with hardwoods because we have no softwoods, and this was of particular interest to the Scandinavians."

Sir Herbert was impressed with the modern equipment in several North European mills and with the swing towards production of bleached kraft pulp, with the sulfite mills turning more and more to the production of dissolving pulp. One of the high spots of the tour was the visit to Mo Och Demsjo Ornskoldsvik, with its efficient by-products industry developed from the utilization of sulfite liquors.

"I was astonished at the number of mills making wallboard from Scandinavian softwoods," said Sir Herbert.

"Australia," he said, "has the same area as the United States and the same population—140,000,000, but there is this difference: 130,000,000 are sheep in Australia. There are vast areas of Australia which, because of lack of rainfall, will never be populous, but the country may eventually support a population of 25 to 35 millions and as the population grows so will grow the pulp and paper industry."

He looks for a continued interchange of trade between Australia and this continent, limited during the next few months by shortage of dollars in the commonwealth. Today, he said, Australia manufactures all the wrapping and cardboard required in the country, but only 20% of the normal newsprint requirements, the remainder coming from Canada to the extent of the necessary foreign exchange.

South African Engineer To Study Australian Methods

No immediate hope for an increased supply of newsprint in South Africa is seen by H. O. Hisey, consultant engineer for the Union Corp. of Johannesburg, South Africa, in an interview with **PULP & PAPER**.

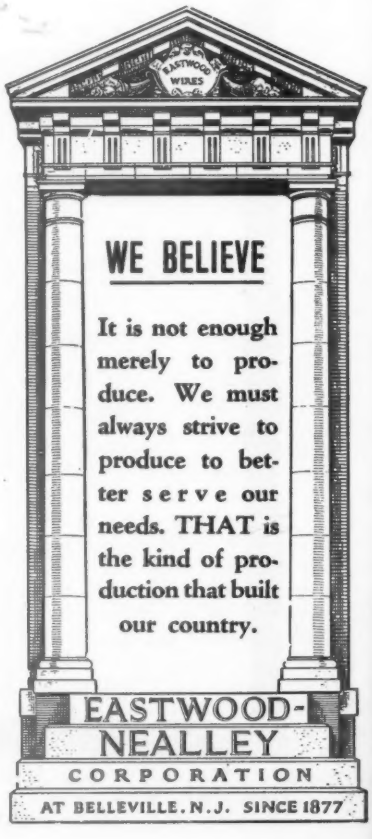
Although newsprint is scarce, Mr. Hisey said that the supply of mechanical papers used in manufacturing bags and boxes is even more critical. He blames decreasing world supplies on Russian annexation of Finland's pulp producing areas, on war conditions which forced Scandinavian producing areas to utilize wood for fuel and on a tendency in the United States and Canada for mills to enter the higher priced product fields.

Mr. Hisey, engineer for the only pulp mill in South Africa, is heading for Australia where the development of eucalyptus trees for pulp usage is being carefully watched by the industry throughout the world.

Board Mill in Bellingham Merges with Pulp Operation

Bellingham Paper Products Co., of Bellingham, Wash., a new modern containerboard mill of present capacity of 40 tons daily completed last year, has been merged with the Puget Sound Pulp & Timber Co. of that city and hereafter will be known as the Paper Products Division of the latter company.

Containerboard being produced on one machine at the Bellingham plant is being sold in various parts of the United States and some is being exported.


EASTWOOD WIRES
WE BELIEVE
It is not enough merely to produce. We must always strive to produce to better serve our needs. THAT is the kind of production that built our country.
EASTWOOD-NEALLEY
CORPORATION
AT BELLEVILLE, N.J. SINCE 1877

Largest producer of unbleached sulphite wood pulp in the U. S.

AIR VIEW OF PLANT • BELLINGHAM, WASHINGTON

ANNUAL CAPACITY 135,000 TONS

FIRST AND FINAL OPERATIONS IN PRODUCTION OF QUALITY WOOD PULP FOR DOMESTIC AND FOREIGN CONSUMERS

PUGET SOUND PULP & TIMBER CO.

Bellingham, Washington

Scents Make Dollars

Don't be too astonished if the butcher's handbill or even your newspaper some day emits the sizzling scent of a sirloin steak and mingles with the odor of frying onions from the grocer's ad.

Dr. Ralph Bienfang, professor of pharmacy at the University of Oklahoma, says odoriferous advertising may be the next step after color. An authority on odors, he is working on his first commercial assignment of that kind—an order from a San Diego restaurateur who wants the pictures of meat courses on his advertising blotters to smell like the real dishes.

THE DOWNINGTON MANUFACTURING CO. is pleased to announce appointment of Frank F. Schrier to its Engineering Staff. Mr. Schrier comes to Downington with 37 years' experience in the design, manufacture and operation of paper mill machinery.

Scented Printing Inks Demonstrated In Issue

An innovation with promising potentials in the field of advertising is demonstrated in a recent issue of Dow Chemical, house organ of Dow Chemical Co., printed in its entirety with scented printing ink.

Perfuming the printed page is not entirely new but this seems to be the first time that aromatic printing ink has been used to produce an alluring fragrance throughout an entire magazine.

The objective in the use of printing inks to impart pleasing aromas is to put the reader in a receptive mood to accept the advertiser's message.

Since 1916, when Dow first entered the aromatics business, the Aromatic Laboratory has carried on an active research program on such chemicals.

In producing the special issue, Dr. Arthur Behr, director of aromatics research at Dow, closely cooperated with Claude E. Walker, production manager of Seemann and Peters, Saginaw, Mich., whose plant produces the publication.

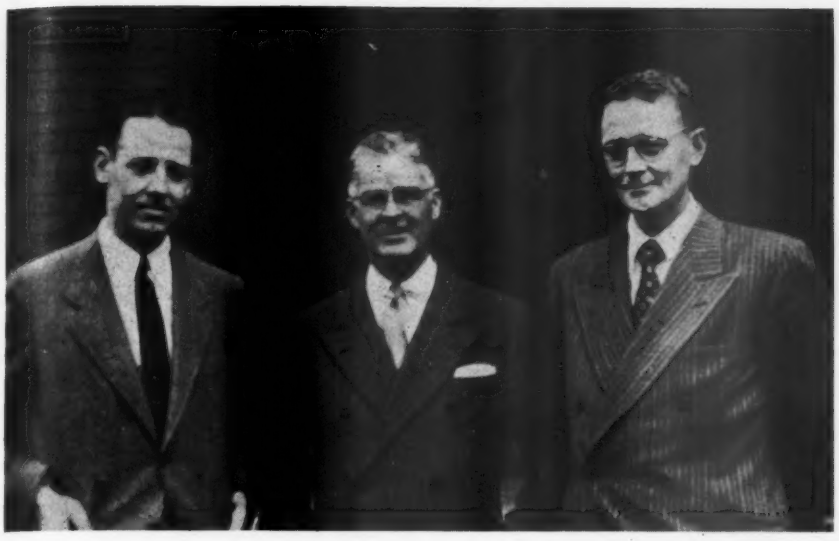
Only one real problem was encountered in the experiment and that involved extended drying time due to the particular processed coated stock on which the Diamond is printed. Consistency of the ink was not effected by adding the essence and the special ink had no effect on rollers. Snap-set ink, 120 half tone screen magnesium plates were used. No delay in wash-up time was experienced and the ink showed no tendency to fill in the screen. Mr. Walker stated that ink agitators on the press are essential.

Pulp and Paper

LYDDON & COMPANY (AMERICA) INC.
EXPORTERS OF WOOD PULP TO BRITAIN, SOUTH AMERICA AND ALL OTHER WORLD MARKETS

PARSONS & WHITTEMORE
INCORPORATED
WOOD PULP
WORLD-WIDE PAPER EXPORTERS

10 EAST 40TH STREET, NEW YORK 16, N. Y.
LONDON · PARIS · OSLO · STOCKHOLM · SAO PAULO · MONTREAL



HERE ARE THREE "founding fathers" of the "Chinese Order of Papermakers"—the Three Musketeers of the well known Park Club of Kalamazoo, Mich. Left to right: JAMES R. VERDON, Asst. Mgr. of American Cyanamid Co. in that Midwest manufacturing and distributing point; ROY W. HOLDEN, Midwest representative of Stowe-Woodward, Inc., and JOHN D. (Jack) DICKSON, Jr., Midwest representative for R. T. Vanderbilt Co. Inc. In every papermaking center of the continent, there are a few men in allied industries who do the background work that makes a success of industry meetings and this trio are among a small nucleus in Kalmazoo Valley who generally do that work.

Personals

MIDDLE WEST

NATHAN H. BERGSTROM, vice president of the Bergstrom Paper Co., Neenah, Wis., is chairman of the water works commission in Neenah. He is also an elder of the Presbyterian church, as was his father before him, and formerly was its Sunday school superintendent.

DORIS ALEXANDER, one of the five daughters of John Alexander, president of Nekoosa-Edwards Paper Co., was married Jan. 10 to Gerry Veneman of Chicago.

MRS. T. E. ORBISON, president of Appleton Woolen Mills of Appleton, Wis., is the Wisconsin state president of the American Association of University Women. Last summer she attended the International Federation of University Women which met in Toronto, Canada. Women from 31 countries attended.

FRANK E. HUFFORD, general traffic manager of M & O Paper Co., was guest chairman at a recent Minneapolis Traffic Club luncheon and for a program he brought along President Donald D. Davis and a number of other M & O officials and Mr. Davis gave an interesting talk on management's relations with the transportation field.

CARL CHOPIN, a general foreman at Thilmany Pulp & Paper Co., in charge of all foremen in the pulp mill from wood room to bleach plant, has recently qualified for the Quarter Century Club. His wife, the former Edna Esler, formerly worked in Thilmany's billing department and they have one son, Michael, 2½.

DR. DUNCAN S. BROWN, superintendent of the Lockland, Ohio, plant of Gardner-Richardson Co., has been promoted to Lockland plant manager. He has been associated with the company for ten years and was formerly technical supervisor at Middletown.

F. JAMES SENSENBRENNER has joined the American Paper Co., Milwaukee, as a vice president. For the past 15 years he has been with Kimberly-Clark Co., Neenah, Wis., in its Chicago sales division.

HARRY HADLEY, general superintendent of the Middletown Board Mills of Gardner-Richardson Co., in Middletown, O., has been promoted to Middletown mill manager. Mr. Hadley has been with Gardner-Richardson 26 years and was educated in Quebec and Ohio.

GLENN STEWART, advertising and promotion manager of Kalamazoo Vegetable Parchment Co., has been appointed by Mayor Henry Ford, Jr., of Kalamazoo, Mich., as executive director of a campaign to collect food, clothing and funds for the French town of Fougeres, which has been "adopted" by Kalamazoo. Fougeres is a town in Brittany which was hard hit by the war.

GLENN STEWART, Adv. and Promotion Mgr. for KVP, who is Executive Director of a committee in Kalamazoo (appointed by Mayor) to raise food, clothing and funds for Fougeres, Brittany, war-hit town "adopted" by Kalamazoo. Important part of program is helping 200 French school children, he said. Personal contact between families of Kalamazoo and Fougeres is a "major by-product" of the drive, said Mr. Stewart.

Vanden Akker Addresses Lake States TAPPI

Dr. J. A. Van den Akker of the Institute of Paper Chemister, Appleton, Wis., was the featured speaker at the Lake States TAPPI dinner on Jan. 13 at the American Legion clubhouse in Appleton. He spoke on optical properties of paper.

Industrial Psychologist To Speak in Kalamazoo

The February meeting of the Michigan Superintendents Division will be held at the Park-American Hotel in Kalamazoo at 6:30 p.m. on Thursday, the 19th, with Dr. William Thompson, consulting psychologist of Stevenson, Jordan and Harrison, management engineers, of Chicago, Ill., as the speaker.

His subject will be "Psychology in Industrial Relations," and he will be introduced by William H. Hathaway, the second vice chairman of the division. William Astle, beater superintendent at Michigan Paper Co. is chairman and Olin W. Callighan, of Edgar Bros., is secretary-treasurer.

DR. OTTO KRESS, technical director of the Institute of Paper Chemistry, is not retiring from that position, as was erroneously reported in a recent issue of another magazine. His many friends in the industry, however, will be glad to know that the energetic institute director is going to "take it a little easier."

DR. EMIL HEUSER, retired head of the cellulose division at the Institute of Paper Chemistry, Appleton, Wis., is now making his home with a son in California. He will be group leader emeritus and consultant for the Institute, according to Westbrook Steele, executive director. Dr. Heuser was given an honorary degree by St. Lawrence College.

JOHN WOLLWAGE, manager of the Lakeview and Badger-Globe mills of Kimberly-Clark Corp., was master of ceremonies at a dinner at Menasha in honor of 27 pensioners of the Neenah-Menasha division of the company.

RAYMOND L. BARTON, general superintendent of Michigan Paper Co. of Plainwell, and Mrs. Barton, recently spent two weeks in Groveton, New Hampshire, their old home and it was in the Groveton mill that Ray started his career.

NEIL E. NASH, vice president, and *F. G. KILP,* manager of woodland operations, Nekoosa-Edwards Paper Co., have traveled extensively in Canada and Far West in recent months in interest of pulpwood production for their company.

ART SCHMALZ, assistant general superintendent with Thilmany Pulp & Paper Co., and his three brothers, have 118 years' service with that mill. Art's 42 years were broken only by a period of touring U. S. and gaining experience. Ray, supercalender and rewinder foreman, has 32 years; Loyal, in wax department, has 26, and Orris, color and ink man, has 16 years.

Personals

NORTHEAST

John Heuer Named

St. Regis Paper Co. announces appointment of John H. Heuer as assistant to Fred C. Goodwill, technical director of the Printing, Publication and Converting Paper Division of the company. Mr. Heuer will make his headquarters at the central laboratory of the company at Deferiet, N. Y.

He graduated in chemical engineering from the University of Washington and was previously in important positions in Weyerhaeuser Timber Co., Oxford Paper Co., B-FD Co. and, after three years in the European War Theater with Army Engineers, he was technical director at Newton Falls Paper Co.

BURT G. STOCKWELL, chairman of the board of Lockport Felt Co., died Dec. 7 in Lockport, N. Y. From 1935 to 1945, Mr. Stockwell, who was 79, was president of Lockport Felt.

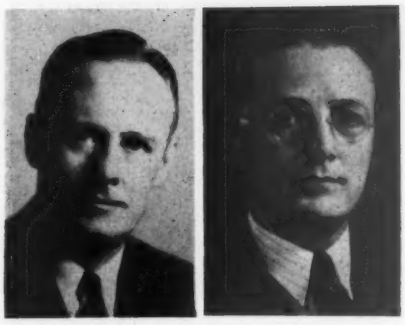
ALTON G. BUTTS, 9 Fairview Heights, Utica, N. Y., has retired from the Mutual Box Board Co. after many years as sales manager. Upon his retirement he was presented with an appropriately engraved wrist watch by his Mutual associates. His present plans are undecided.

HARRY E. RIGGS has been appointed vice president in charge of sales of the Strathmore Paper Company, West Springfield, Mass., and a director of that company. He has been with Strathmore since 1913, and was sales manager and a member of the executive committee at the time of his recent appointment.

FRANK W. SMITH, vice president of Bulkley, Dunton Paper Co. S. A., has returned from a 70-day trip about ten countries. The Scandinavian countries, reports Mr. Smith, have been badly hit by lack of rainfall, which has hampered transport of pulpwood on waterways. He reports a critical paper shortage in Europe. In Britain, the gummed paper industry in doing "landslide business," he said, because labels are used in large quantities for readdressing envelopes, some of which make as many as six trips through the mails before they are discarded.

R. T. DePAN has been appointed development engineer for Downingtown Manufacturing Co., Downingtown, Pa. He is a 1940 graduate of the pulp and paper course, New York State College of Forestry, Syracuse, and has had six year's experience in development and research for The Flintkote Co., East Rutherford, N. J., and one year as plant manager of the Flintkote, Mt. Carmel mill.

JOHN STADLER, of the Montreal engineering firm of Stadler, Hurter & Co., paid a visit recently to the west coast, conferring with Officials of Columbia Cellulose Co., which is preparing for construction of a 200-ton high grade sulfite mill on Watson Island, near Prince Rupert.



HARRY E. RIGGS (left), who has been elected a Director and Vice President in charge of Sales for Strathmore Paper Co., West Springfield, Mass., according to announcement of George E. Williamson, President. The latter also became Chairman. Mr. Riggs has been with Strathmore since 1913.

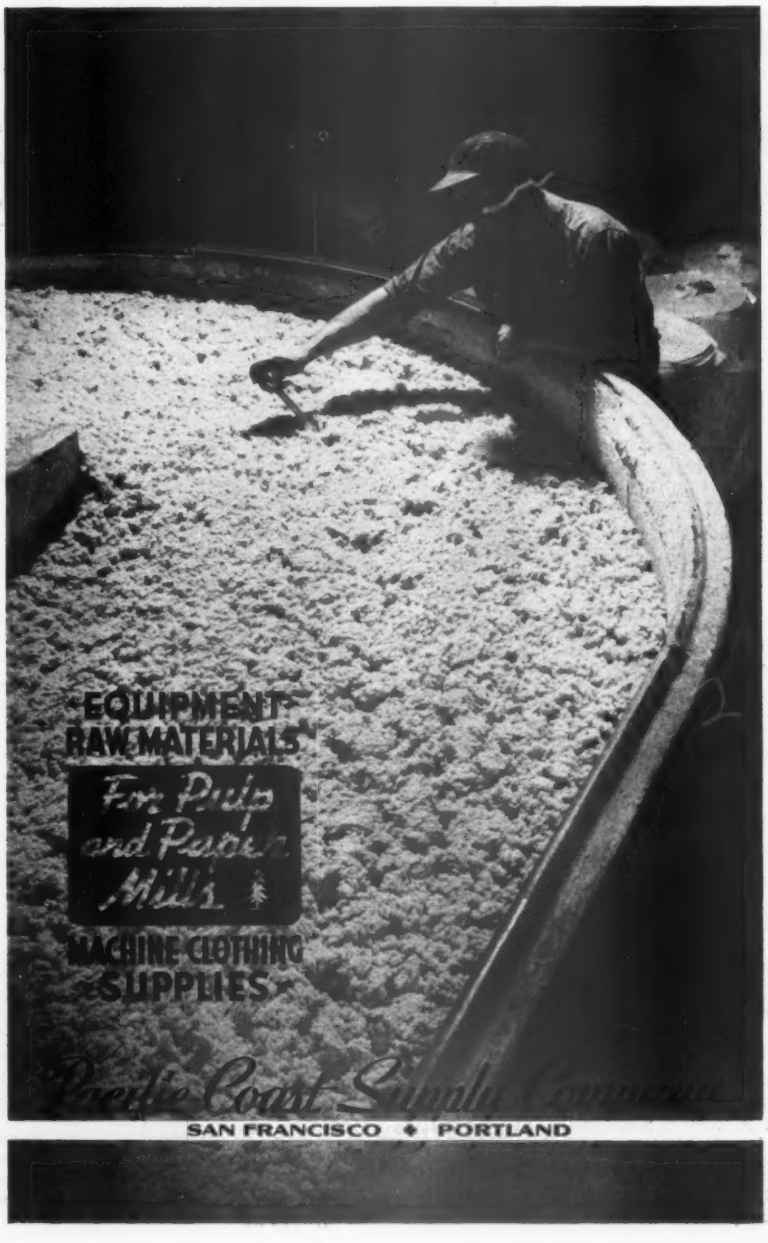
ARCH CARSWELL (right), who has been named General Sales Mgr. of St. Regis Paper Co.'s Multiwall Bag Division, according to announcement of Vice President Edward R. Gay. Mr. Carswell has been Pacific Coast Division Manager. H. W. Sloan succeeded him in that position.

E. T. Street Dies — Was Downington President

Edward T. Street, president and sales manager of the Downingtown Mfg. Co., Downingtown, Pa., passed away in his sleep Jan. 7, 1948. Seemingly, he had been in the best of health and was in his office all the preceding day.

Mr. Street had been president of Downingtown Mfg. Co. about a year and a half, before which he was vice president in charge of sales and, before that, chief engineer. He contributed much to various improvements in design of the company's products and was especially active in the development of Downingtown Wallboard Machines, used by many producers in this country and abroad.

Before his association with the Downingtown Mfg. Co., Mr. Street was for ten years chief engineer of the Ruberoid Co. and, before that, was with the Minnesota and Ontario Paper Co. He was a native of Ohio and a graduate of Oberlin College.



Personals

PACIFIC COAST

F. L. ZIEL, resident manager of the Port Townsend mill, Crown Zellerbach Corp., is spending most of his spare time building a 2-floor summer home for his family at Point Beckett, one of the most attractive seashore spots on Olympic Peninsula. Except for chimney bricklaying, Mr. Ziel is doing all the work himself.

DR. HAROLD BIALKOWSKI, associated research director of the Pulp Division, Weyerhaeuser Timber Co., is making his second trip East in just two months when he goes to the TAPPI convention in New York to become a new member of TAPPI's executive committee. He made a business trip in January to Chicago and other points in that area.

JAMES T. SHEEHY, former manager of Rayonier's mill in Fernandina, is moving to the Pacific Northwest to act in a liaison capacity between the Washington state mills and divisions of the company and the New York offices, according to Edward Bartsch, president. Russell Erickson succeeded him as resident manager in Fernandina.

VERNON L. TIPKA, South Central states and Pacific Coast representative for Bird Machine Co., completed a tour of Pacific Coast mills before the first of the year and he and Mrs. Tipka spent the holiday period with relatives at Toledo, Ore., on the Pacific Ocean, before going back to their Evanston, Ill., home.

DONALD L. OSBORNE, assistant personnel and safety supervisor at the Port Townsend kraft mill of Crown Zellerbach Corp., serving under Bernard Mullaney, recently spent four weeks in San Francisco as assistant to Vice President A. R. Heron.

DR. ROBERT E. BROWN, former assistant manager of the Hoquiam, Wash., mill of Rayonier Inc., left Jan. 2 with his wife and daughter, Sally, for their new home in New York where Dr. Brown will be assistant to Dr. R. M. Pickens, technical sales manager of the company.

DAN ROBBINS, a member of the famous Ohio paper industry family of Robbinses and head draftsman for the engineering staff of the Puget Sound Pulp and Timber Co. has built a water skiing jump at his place on Lake Whatcom, Wash., and can be seen most any weekend risking a good ducking in the chill waters of the lake as he tries the new apparatus. Don Lich, Puget Sound draftsman, and Ralph Wyndham, instruments man, have also developed considerable skill on the tricky boards.

BENJAMIN B. FISHER, payroll clerk of Fibreboard Products Inc., Stockton, Calif., will be married Jan. 30 to Miss Dorothy Green, formerly of Kaukauna, Wis. Her parents are Rev. and Mrs. L. F. Green, Shiocton, Wis.

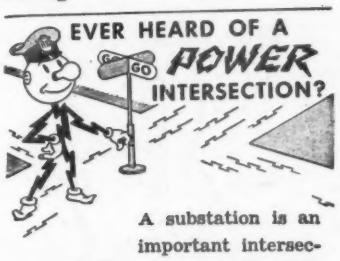
BURKE MORDEN of Morden Machines Co. has a heavy schedule of traveling for the current period out of Portland, Ore., with a February trip to Ohio, Michigan, New York and Pennsylvania mills plus Paper Week, a Match trip to Minnesota and Wisconsin and April-May into the South and to the New Orleans superintendents convention.

VERNICE M. CHARLES of Seattle, representative of Knox Woolen Mills and other suppliers on the Pacific Coast, spent the holidays with her family—the McCurdys of Oconto Falls, Wis. Her parents and a sister and a brother, who is with St. Regis, were home for the reunion.

JIM HYDE, for the past nine years chief of waxing papers division of Central Technical and Research Department, Crown Zellerbach Corp., Camas, Wash., resigned from this position Jan. 1 to become manager of Crop King Co., a division of Richey & Gilbert, at Yakima, Wash. This organization manufactures spray, deals in agricultural fertilizers, and irrigation spray systems. *C. S. FUNK,* formerly chief of waxing papers division, has replaced Hyde as chief. Hyde has been affiliated with C-Z organization for 17 years.

DAN KEATING, of Stauffer Chemical Co., and Mrs. Keating, of Portland, Ore., welcomed a baby daughter to their family and it is said Dan won a few side bets with some friends who were sure their boys would have another brother.

DOUG ARMSTRONG, superintendent at Oregon Pulp & Paper Co., Salem Ore., enjoyed seeing his son's picture in the Salem paper with a big fish he caught. The fish looked as big as the teen-age Armstrong.



A substation is an important intersection on the "electric power highway." But, complex and costly equipment keeps kilowatt traffic routed from the main transmission arterials to distribution lines in properly regulated amounts—depending upon customer demand. In Puget Power's distribution system there are 16 major and 408 minor substations . . . one important reason why distribution represents over half of the investment value of a large power system.

PUGET SOUND POWER & LIGHT CO.

FASTER CUTTING

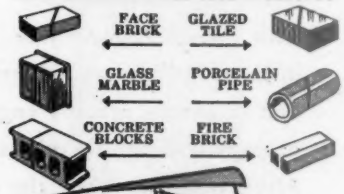
WET or DRY with the NEW HD 48 CLIPPER Masonry Saw

You'll be amazed how quickly and easily you can cut virtually any special length or shape from the hardest masonry materials. Clippers save time — save material, assure better workmanship on every job.

With the exclusive Clipper design, proven throughout the world and guaranteed to provide the fastest cutting speed and the lowest cutting costs.

DUSTLESS MASONRY CUTTING so fast and easy. Just turn on the circulating water system and slice through the hardest masonry materials. Foot Pedal control for varying material sizes or lock the cutting head at a set position, whichever is desired.

CLIPPER MAKES THESE CUTS IN SECONDS



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PULP-NEWSPRINT OPERATION PLANS

A newsprint mill as well as a pulp mill (probably kraft) will be built at Duncan Bay, east coast of Vancouver Island, by the interests associated with Canadian Western Lumber Co. of Vancouver.

First announcement of this project appeared in the January issue of **PULP & PAPER**.

It is proposed to build two initial units of 165 tons capacity each—one for newsprint and the other for pulp, and construction will be started as soon as preliminary details have been worked out. Each of these units will be capable of further expansion as conditions warrant, and depending on the supply of pulpwood.

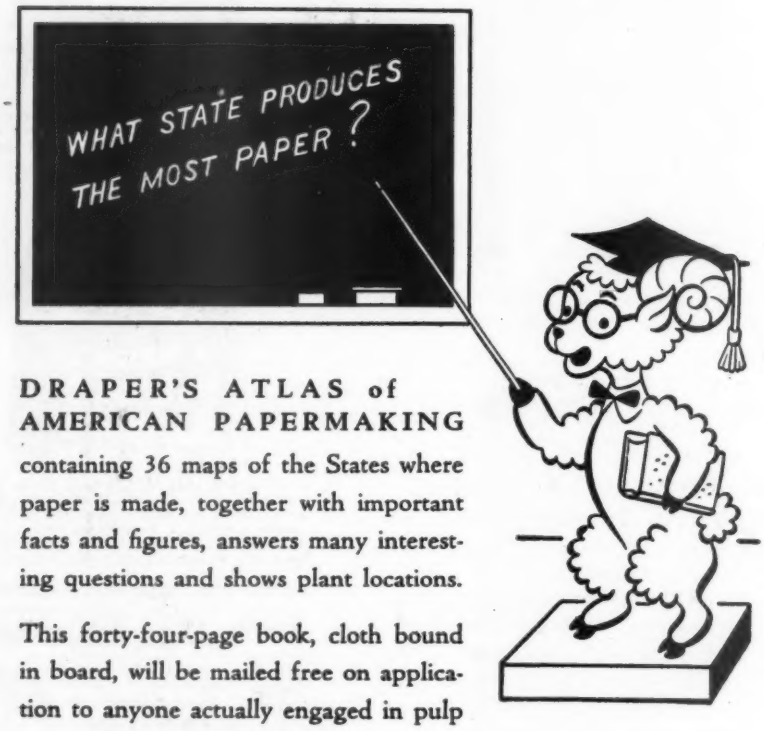
In other words, there is no longer any doubt but that Duncan Bay is to become the center of a major development of wide significance to the industry. One of the reasons for the location at Duncan Bay is the easy access to an abundance of water for processing purposes; another, is the proximity of the British Columbia government's new hydro-electric plant at Elk Falls, Campbell River, which is already supplying electrical energy for the new 165 ton unbleached kraft mill of Bloedel, Stewart & Welch, Ltd., at Port Alberni.

Apart from its importance as a new supplier of pulp and paper, the Duncan Bay project is of special interest because of the fact that it represents the first large-scale undertaking of its type that will depend exclusively on salvaged wood for at least the first 20 years of its operation.

Half of Amount Is Subscribed

About 50% of the proposed output of the proposed new New Brunswick newsprint mill has been subscribed.

What do you know about Paper?



DRAPER'S ATLAS of AMERICAN PAPERMAKING

containing 36 maps of the States where paper is made, together with important facts and figures, answers many interesting questions and shows plant locations.

This forty-four-page book, cloth bound in board, will be mailed free on application to anyone actually engaged in pulp or papermaking. To others, the price is $2.00 postpaid, while the edition lasts.

The DRAPER Felt

DRAPER BROTHERS COMPANY

Woolen Manufacturers Since 1856

CANTON, MASSACHUSETTS

Ralph E. Briggs, Sales Manager

BRADFORD WEST, Pittsfield, Mass.
WILLIAM N. CONNOR, Jr., Canton, Mass.
L. H. BREYFOGLE, Kalamazoo, Mich.
WALTER A. SALMONSON, 519-20 White Bldg., Seattle, Wash.
L. L. GRIFFITHS, Jr., Kalamazoo, Mich.

Answer to Question No. 1 New York, 1,542,114 tons U.S. Census for 1945

Stephen Goerl Opens Agency for Industry

A new agency to specialize in the advertising and merchandising of pulp, paper, paper products, and packaging materials has been established by Stephen Goerl, formerly advertising and sales promotion manager of the Bulkley-Dunton Organization. Operating under the firm name of Stephen Goerl Associates, the agency is located at 22 East 40th St., New York.

Prior to joining Bulkley, Dunton five years ago, Mr. Goerl was connected with Young and Rubicam, New York, where he handled a paper product account. He has had close to 20 years' experience in advertising, sales promotion, and public relations.

Stephen Goerl Associates will continue to publish the Pulp and Paper Bulletin for Bulkley, Dunton and act as advertising and mechandising counsel to the organization, including its New England subsidiary, Carter, Rice & Co. Corp.

In announcing his agency, Mr. Goerl said: "It seems to me that there is a very definite need for a specialized agency such as ours. The paper and packaging industries have developed tremendously and at an extremely rapid rate in the last decade. This development continues, volume is still increasing, and new uses are still being found for the products of these industries, which now consist of virtually hundreds of different branches."

ASSISTANT TO MILL MANAGER

A good position is open to a young man experienced in paper mill management with knowledge of stock preparation, newsprint preferred, also knowledge of shipping and keeping records. Excellent opportunity old established mill in northern New York state. Good salary and working condition. Give age, background and present employment. Reply Box 2, Pulp & Paper, 71 Columbia St., Seattle 4, Wash.

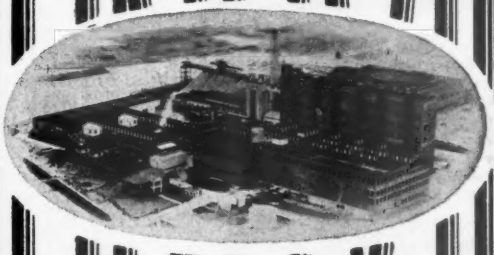
Wanted—Resident construction engineer to represent large and well-established pulp and paper manufacturer in central states area on three-year pulp and paper mill modernization and construction program with probability of permanent position. Preferably graduate mechanical engineer with five years engineering experience. Address R. L. Warner, The Mead Corporation, Chillicothe, Ohio.

WANTED—Graduate Mechanical Engineer—experienced in Paper Mill Work—age about 40—to take charge of Engineering Office. Location, Wisconsin. Give full data and required salary in first letter. Write c/o Box 3, Pulp & Paper, 71 Columbia St., Seattle 4, Wash.

Wanted—For layout and detail work on board, preferably graduate mechanical engineer with not less than five years design experience in the pulp and paper industry. Salary according to qualifications and experience. Permanent position with large and well-established pulp and paper manufacturer in central states area. Address R. L. Warner, The Mead Corporation, Chillicothe, Ohio.

GENERAL RUBBER & SUPPLY CO.
Yarway Steam Traps, Steam Hose, Packings (Steam, Oil and Water)
GAUGE GLASSES
Magic Boiler Preservative
101 S. W. First Ave., Portland, Ore. ATwater 6565

SOUNDVIEW



High Grade

BLEACHED SULPHITE PULP

SOUNDVIEW PULP COMPANY

EVERETT WASHINGTON

Service Pin Dinner For 153 Camas Employes

A service pin dinner recognizing service of 153 employes of the Crown-Zellerbach Corp., Camas, Wash., was held Dec. 16. A total of 1805 man-years of affiliation with the company is represented by the service pins presented at the dinner.

H. L. Zellerbach, president of Zellerbach Paper Co., the sales affiliate of the corporation, as speaker of the evening, told the group of the origin of the company by his grandfather in 1868 in San Francisco. Originally this was a jobbing firm and later acquiring paper manufacturing plants. He mentioned the current expansion program taking place in the several plants and the recent completion of the "largest single-unit merchandising warehouse in the world on one floor," which is the company's new 400,000 square foot building in Los Angeles.

Frank A. Drumb, resident manager of the C-Z Camas plant, who received a 20-year pin, welcomed the attending group, saying the occasion is in recognition of "our greatest asset, our employes."

J. E. Hanny, formerly resident manager of the Camas mill and now vice president of Crown-Zellerbach Corp., in charge of manufacturing, presented the pins. He emphasized the security of mill personnel and also their communities.

Participants at service pin dinner of Crown-Zellerbach Corp., Camas, Wash., Dec. 16: Top view—Resident Manager F. A. Drumb, who received his 20-year pin, is congratulated by Vice President J. E. Hanny, formerly resident manager of Camas. Below: Mr. Hanny (center), who presented pins, and two employes receiving 40-year pins—William E. Morris, on left, and Francis W. Province.

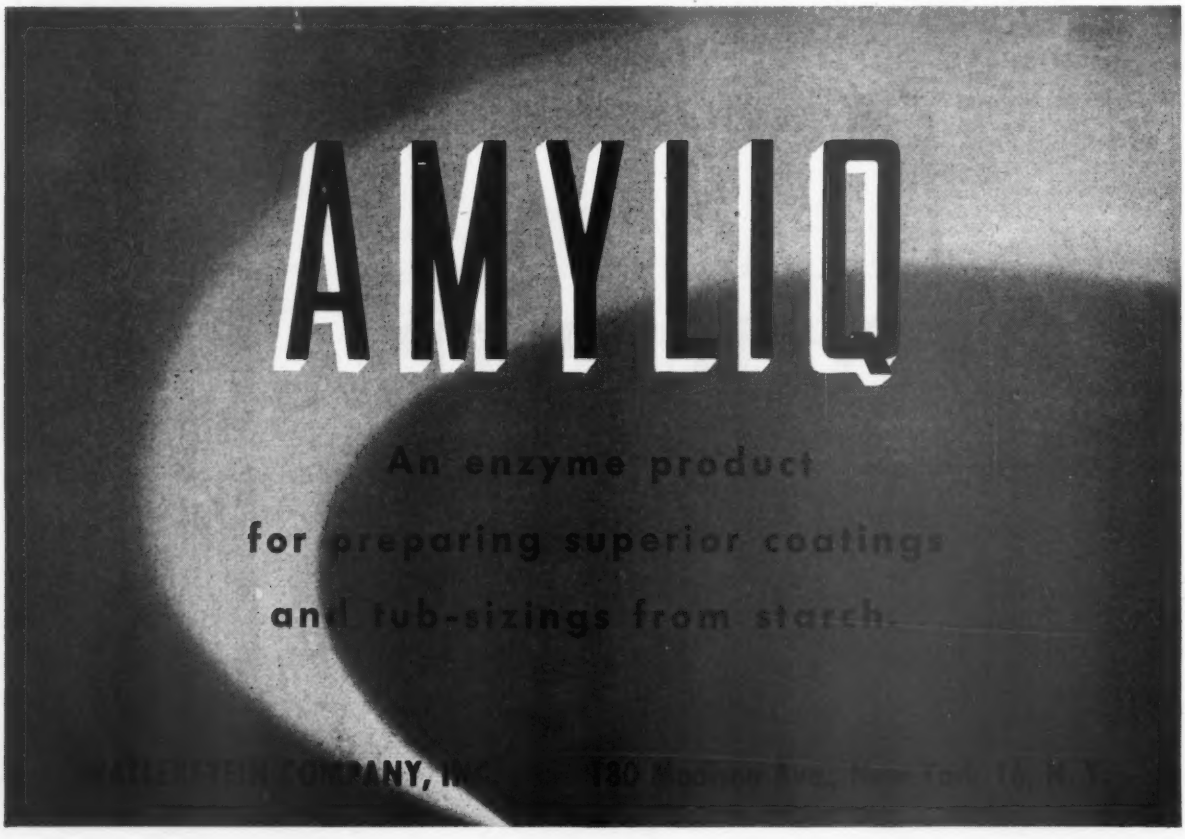
V. C. Gault, personnel supervisor, was master of ceremonies.

Of the 153 service pin recipients, two were in recognition of 40 years' service by William E. Morris and Francis W. Province; three 35-year pins, including Joseph H. Hoxie, Joseph J. Moravec, and Fred C. Stevey; and six 30-year pins, Pete Fertello, George W. Johnson, Joe Martino, Harvey R. Sherk, Charles Zinserling, and Carlo Zollo. Besides these there were awarded eight 25-year pins, 27 20-year pins, 7 15-year pins, 19 10-year pins, and 81 five-year pins.

Why Earnings Must Be Maintained—D. L. Luke, Jr.

David L. Luke Jr., president of West Virginia Pulp & Paper Co., has expressed the opinion that the company must maintain or increase net earnings of about $10,000,000 annually in order to avoid gradual liquidation of its physical assets through depreciation and obsolescence of equipment.

He attributed this to the fact that the cost of replacement in heavy industry, during inflationary periods such as now being experienced, is greatly in excess of funds provided for normal depreciation and depletion.



Wrist Watches for Veterans

Twenty-year employes were featured guests of the Christmas party given by the management of the Puget Sound Pulp & Timber Co. for all employes of the Bellingham, Wash., sulfite mill. The facilities of the Leopold Hotel were taxed to the limit when 550 sat down to a dinner of choice steaks, followed by a program and dance.

Organ music was played by Mrs. Brenda Brandon, wife of Ernest Brandon of the engineering staff. Group singing was lead by Oscar Frasier, accompanied by Mrs. Frasier.

Lawson Turcotte, executive vice president, was master of ceremonies.

With the help of Mrs. Turcotte, engraved wrist watches were then presented to the 20-year men who had been with the company since its inception. Mr. Ralph Roberg, vice president and sales manager, presented Mr. Turcotte with a watch.

Following are other 20-year men: Erik Ekholm, general superintendent; Frank Hedberg, shift foreman; Arthur Berthiame, shift foreman; Claude Fillinger, foreman; Walter Sewell, paymaster; Robert Atkinson, cook; Stanley Lewis, cook; Sydney Gibson, storeroom; Thornton Behme, machine tender; Herbert Williams, machine tender; Dan MacMonagle, chipperman; Otto Ragan, fireman; H. P. Rowe, president of Local 194, Pulp, Sulfite and Paper Mill Workers; Alvin Schachtschneider, grinderman; Edwin S. Rowe, filterman; William Hoskin and F. J. Gallagher, screenroom; A. P. Moulton, oiler; Ernest Cavallin, watchman; John Engles, watchman; Charles Yeomans, watchman; D. P. Johnson, watchman, and Chester M. Kuder, yard.

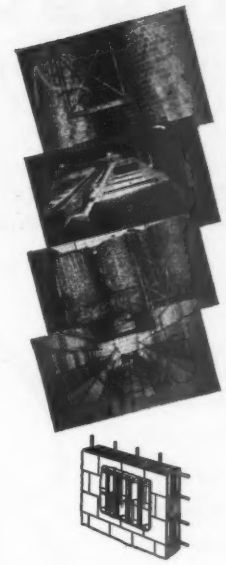
Party arrangements were made by G. A. Okerlund, personnel manager; Sidney Collier and Fred Gilmore, assistant superintendents.

Biggest Mill in Russia

First put into operation in 1940 and expanded since then, one of the largest integrated pulp and paper and by-products plants in the world is reported in Soviet Russia.

The Segezha paper combine, located in the Karelo-Finnish Soviet Socialist Republic along the Leningrad-Murmansk Railroad, now produces two-thirds of the total Soviet output of kraft wrapping paper, paper bags, and paper containers, according to the Soviet press. By-products include turpentine, rosin, and soap.

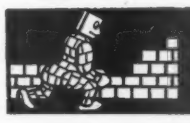
Stebbins Semtile Tanks



. . . Have saved pulp and paper manufacturers many thousands of dollars through keeping stored or processing materials clean and free from contamination.

Stebbins Semtile tanks are erected from Semtile blocks which are a hollow salt glazed tile, cored to permit the use of both horizontal and vertical reinforcing. The cores are solidly filled with concrete forming a reinforced concrete wall faced on both sides with Stebbins glazed tile. This hard, durable, glazed surface is easy to clean and permits free flowing of stock. Semtile construction, because of its long life and low maintenance, is excellent for storage tanks, bleach tanks and chests.

Consult a Stebbins engineer on your next tank or lining problem.



SEMTILE

Stebbins Engineering Corporation

TEXTILE TOWER SEATTLE 1, WASHINGTON

We Stand Corrected; Is There Any Other Comment on Early Kraft Mills

R. H. Stevens, technical director of the National Container Corp., Kraft Pulp and Board Division, Jacksonville, Fla., has amiably taken to task one of our editors as well as the research library of Brown Company, Berlin, N. H., for this statement in the December, 1947, **PULP & PAPER**: "The La Tuque mill, the second sulfate mill on the North American continent, started operating in 1910."

Points out Mr. Stevens: "Since the Brompton mill at East Angus, Que., is generally accorded priority as the first, any other sulfate mill on the North American continent which began operations before 1910 must have prior claim over the La Tuque mill for second place. Such a mill is the Halifax Paper Corp., Roanoke Rapids, N. C., which started Feb. 21, 1909. This is generally regarded as the first in the United States."

If Mr. Stevens is correct, the La Tuque mill may be second in Canada, but not second on the North American continent. Our eastern editor has mailed his apologies to our Canadian editor—for taking in too much territory. Our Southern editor will take our apologies in person to the Halifax people on his next trip into North Carolina. Meanwhile, pending other comment, Mr. Stevens' correction stands. Are there other historians in the house?

T. W. Bournes Among Employes Honored

Pacific Mills and Canadian Boxes Ltd. management in Vancouver, B. C., recently presented 32 employes with service pins.

A special presentation was also made to Thomas W. Bourns, purchasing agent, who joined the company in 1917, the year in which the Ocean Falls plant produced its first newsprint paper.

Thirty-year service pin recipients were Mr. W. Bourns, Frank C. Eadie, and William H. Thompson; 25-year pins went to Amy V. Mohler and James A. Wilson, and 20-year pins to Johann F. Christianson, Earl A. Demoray and Cyril J. Hague.

PUGET SOUND PULP & TIMBER CO. employes were on the receiving end of over three tons of turkeys as a gift of the Puget Sound Pulp & Timber Co. Continuing a policy which started over ten years ago, the company distributed tickets good for 15-pound turkeys to over 400 employes of the large sulphite mill.

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